# SERVICE MANUAL

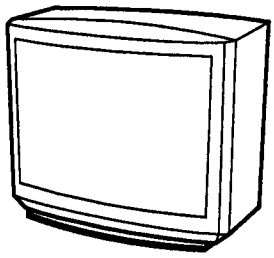
# AA-2 CHASSIS

| MODEL | COMMANDER | DEST. | CHASSIS NO. |
|---|---|---|---|
| KV-27V20 | RM-Y135 | US | SCC-J71H-A |
| KV-27V20 | RM-Y135 | Canadian | SCC-J73G-A |
| KV-27V25 | RM-Y137 | US | SCC-J71J-A |
| KV-27V25 | RM-Y137 | Canadian | SCC-J73H-A |
| KV-27V35 | RM-Y137 | US | SCC-J71K-A |
| KV-27V35 | RM-Y137 | Canadian | SCC-J73J-A |
| KV-29V20M | RM-Y135 | E | SCC-J74H-A |
| KV-29V35C | RM-Y137 | E | SCC-J74L-A |
| KV-29V65M | RM-Y137 | E | SCC-J74J-A |
| KV-29V75M | RM-Y137 | E | SCC-J74K-A |
| KV-32V25 | RM-Y137 | US | SCC-J71L-A |
| KV-32V25 | RM-Y137 | Canadian | SCC-J73K-A |
| KV-32V35 | RM-Y137 | US | SCC-J71M-A |
| KV-32V35 | RM-Y137 | Canadian | SCC-J73L-A |
| KV-34V35C | RM-Y137 | E | SCC-J74M-A |

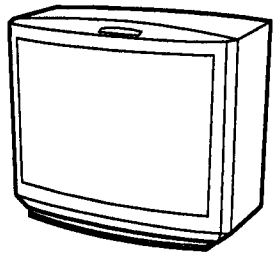
**Note :**

**1. Adjustment Manual for this model is separately published.**

| | Adjustment Manual |
|---|---|
| Part No. | 9-965-822-01 |



KV-27V20/27V25/29V20M
29V65M/32V25



KV-27V35/29V35C/29V75M
32V35/34V35C

SONY QTY
WRPC(AS)
996581601

MICROFILM

## TRINITRON® COLOR TV

## SONY®

※ **Please file according to model size.** .....

27 | 29 | 32 | 34

# SPECIFICATIONS

| Model number | KV-27V20 | KV-27V25 | KV-27V35 | KV-29V20M | KV-29V35C | KV-29V65M | KV-29V75M | KV-32V25 | KV-32V35 | KV-34V35C |
|---|---|---|---|---|---|---|---|---|---|---|
| **Television system** | American TV standard | | | | | | | | | |
| **Channel coverage** | VHF: 2-13 / UHF: 14-69 / CATV: 1-125 | | | | | | | | | |
| **Antenna** | 75-ohm external antenna terminal for VHF/UHF | | | | | | | | | |
| **Picture tube** | Hi Black Trinitron® tube | | | | | | | | | |
| **Screen size (in.)** | 27-inch picture measured diagonally | | | | | | | 32-inch picture measured diagonally | | |
| **Power requirements** | 120 V, 60 Hz | 120 V, 60 Hz | 120 V, 60 Hz | 120 V, 60 Hz | 220 V, 50/60Hz | 120 V, 60 Hz | 120 V, 60 Hz | 120 V, 60 Hz | 120 V, 60 Hz | 220 V, 50/60Hz |
| **Number of inputs/ outputs** | | | | | | | | | | |
| **Video**[1] | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 |
| **S video**[2] | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 2 | 2 |
| **Audio**[3] | 2 | 3 | 3 | 2 | 3 | 3 | 3 | 3 | 3 | 3 |
| **Audio out**[4] | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| **Monitor out**[1] | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| **TV out**[1] | – | – | 1 | – | 1 | – | 1 | – | 1 | 1 |
| **S-Link** | – | • | • | – | • | • | • | • | • | • |
| **Speaker output (W)** | 5W × 2 | 5W × 2 | 10W × 2 | 5W × 2 | 10W × 2 | 5W × 2 | 10W × 2 | 5W × 2 | 10W × 2 | 10W × 2 |
| **Power consumption (W)** | | | | | | | | | | |
| **When in use (Max.)** | 165W | 180W | 195W | 165W | 195W | 180W | 195W | 190W | 210W, 2.75 A | 210W |
| **In standby** | 9W | 9W | 13W | 9W | 13W | 9W | 13W | 9W | 13W | 13W |
| **Dimensions (W/H/D) (mm)** | 660.4 × 602.5 × 521.2 mm | 690 × 575.4 × 503.4 mm | 690 × 575.4 × 503.4 mm | 660.4 × 602.5 × 521.2 mm | 690 × 575.4 × 503.4 mm | 690 × 575.4 × 503.4 mm | 690 × 575.4 × 503.4 mm | 821 × 675.3 × 587 mm | 821 × 675.3 × 587 mm | 821 × 675.3 × 587 mm |
| **(in.)** | 26 × 23 3/4 × 20 5/8 in. | 27 1/4 × 22 3/4 × 19 7/8 in. | 27 1/4 × 22 3/4 × 19 7/8 in. | 26 × 23 3/4 × 20 5/8 in. | 27 1/4 × 22 3/4 × 19 7/8 in. | 27 1/4 × 22 3/4 × 19 7/8 in. | 27 1/4 × 22 3/4 × 19 7/8 in. | 33 1/2 × 27 5/8 × 24 in. | 33 1/2 × 27 5/8 × 24 in. | 33 1/2 × 27 5/8 × 24 in. |
| **Mass (kg) (lbs)** | 40.6 kg 89 lbs 8 oz | 43 kg 94 lbs 13 oz | 43 kg 94 lbs 13 oz | 40.6 kg 89 lbs 8 oz | 43 kg 94 lbs 13 oz | 43 kg 94 lbs 13 oz | 43 kg 94 lbs 13 oz | 70 kg 154 lbs 6 oz | 70 kg 154 lbs 6 oz | 70 kg 154 lbs 6 oz |

[1] 1 Vp-p, 75 ohms unbalanced, sync negative

[2] Y: 1 Vp-p, 75 ohms unbalanced, sync negative
C: 0.286 Vp-p (Burst signal), 75 ohms

[3] 500 mVrms (100% modulation), Impedance: 47 kilohms

[4] More than 408 mVrms at the maximum volume setting (variable)
More than 408 mVrms (fix)
Impedance: 5 kilohms

## Supplied accessories

Remote commander **RM-Y135 (1)** ***(KV-27V20/29V20M only)***

RM-Y137 (1) *(KV-27V25/27V35/29V35C/ 29V65M/29V75M/32V25/32V35/ 34V35C/35V35/35V45/35V75 only)*

Size AA (R6) battery (2)

## Optional accessories

Connecting cables VMC-810S/820S, VMC-720M, YC-15V/30V, RK-74A

TV Stand SU-27A ***(KV-27V20/27V25/27V35/29V20M/29V35C/ 29V65M/29V75M only)***

TV Stand SU-32A *(KV-32V25/32V35/34V35C only)*

TV Stand SU-35A *(KV-35V35/35V45 only)*

U/V mixer EAC-66

Design and specifications are subject to change without notice.

## (●)® SRS (SOUND RETRIEVAL SYSTEM)

The (●) SRS (SOUND RETRIEVAL SYSTEM) is manufactured by Sony Corporation under license from SRS Labs, Inc. It is covered by U.S. Patent No. 4,748,669. Other U.S. and foreign patents pendeing.

The word 'SRS' and the SRS symbol (●) are registered trademarks of SRS Labs, Inc.

# SAFETY CHECK-OUT
# (US Model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.

2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.

3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.

4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.

5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.

6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.

7. Check the B+ and HV to see if they are at the values specified. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.

8. Check the metal trim, metallized knobs, screws, and all other exposed metal parts for AC leakage.
   Check leakage as described below.

## LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufactures' instructions to use these instruments.

2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.

3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOM that is suitable. Nearly all battery operated digital multimeters that have a 2V AC range are suitable. (See Fig. A)

## HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60-100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

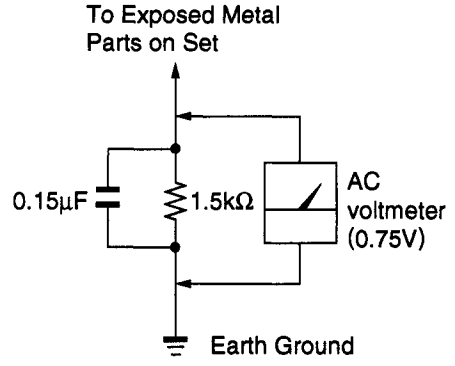



Fig. A. Using an AC voltmeter to check AC leakage.

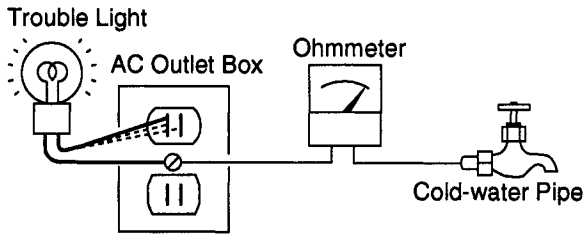



Fig. B. Checking for earth ground.

# TABLE OF CONTENTS


| Section | Title | Page |
|---|---|---|
| **1. GENERAL** | | |
| | Welcome! | 5 |
| | Checking your model number | 5 |
| | Step 1: Hookup | 5 |
| | Step 2: Installing the glass door and adjusting the shelf | 9 |
| | Step 3: Setting up the remote commander | 10 |
| | Step 4: Setting up the TV automatically (AUTO SET UP) | 10 |
| | Changing the menu language | 12 |
| | Adjusting the tilt of the picture (TILT CORRECTION) | 12 |
| | Watching the TV | 12 |
| | Watching two programs at a time-PIP | 13 |
| | Adjusting the picture (VIDEO) | 14 |
| | Selecting the video mode (VIDEO) | 14 |
| | Adjusting picture brightness automatically (LIGHTSENSOR) | 15 |
| | Adjusting the sound (AUDIO) | 15 |
| | Using audio effect (EFFECT) | 15 |
| | Selecting stereo or bilingual programs (MTS) | 16 |
| | Setting the speaker switch (SPEAKER) | 16 |
| | Setting audio out (AUDIO OUT) | 16 |
| | Setting daylight saving time (DAYLIGHT SAVING) | 17 |
| | Setting the clock (CURRENT TIME SET) | 17 |
| | Setting the timer to turn the TV on and off (ON/OFF TIMER) | 17 |
| | Customizing the channel names (CHANNEL CAPTION) | 18 |
| | Blocking out a channel (CHANNEL BLOCK) | 18 |
| | Setting your favorite channels (FAVORITE CHANNEL) | 18 |
| | Setting video labels (VIDEO LABEL) | 19 |
| | Setting Caption Vision (CAPTION VISION) | 19 |
| | Operating video equipment | 20 |
| | Operating a cable box DBS receiver | 21 |
| | Troubleshooting | 21 |
| **2. DISASSEMBLY** | | |
| 2-1. | Rear Cover Removal | 22 |
| 2-2. | Chassis Assy Removal | 22 |
| 2-3. | Service Position | 22 |
| 2-4. | Control Switch Removal (KV-27V35/29V35C/29V75M/32V35/34V35C) | 22 |
| 2-5. | Picture Tube Removal (KV-27V20/27V25/27V35/29V20M/29V35C/29V65M/29V75M) | 23 |
| 2-6. | Picture Tube Removal (KV-32V25/32V35/34V35C) | 23 |
| **3. SAFETY RELATED ADJUSTMENTS** | | 25 |
| **4. DIAGRAMS** | | |
| 4-1. | Block Diagrams | 27 |
| 4-2. | Circuit Boards Location | 35 |
| 4-3. | Printed Wiring Boards and Schematic Diagrams | 35 |
| | • P Board | 36 |
| | • SC Board | 39 |
| | • A Board | 41 |
| | • UV Board | 47 |
| | • WB, SC Boards | 52 |
| | • HV, HS Boards | 55 |
| | • C, G Boards | 59 |
| | • AV, K Board | 64 |
| 4-4. | Semiconductors | 70 |
| **5. EXPLODED VIEWS** | | |
| 5-1. | Chassis (EXCEPT KV-32V25/32V35/34V35C) | 71 |
| 5-2. | Picture Tube (EXCEPT KV-32V25/32V35/34V35C) | 73 |
| 5-3. | Chassis (KV-32V25/32V35/34V35C) | 74 |
| 5-4. | Picture Tube (KV-32V25/32V35/34V35C) | 75 |
| **6. ELECTRICAL PARTS LIST** | | 76 |


---

**(CAUTION)**

**SHORT CIRCUIT THE ANODE OF THE PICTURE TUBE AND THE ANODE CAP TO THE METAL CHASSIS, CRT SHIELD, OR CARBON PAINTED ON THE CRT, AFTER REMOVING THE ANODE.**

**WARNING!!**

**AN ISOLATION TRANSFORMER SHOULD BE USED DURING ANY SERVICE TO AVOID POSSIBLE SHOCK HAZARD, BECAUSE OF LIVE CHASSIS.**
**THE CHASSIS OF THIS RECEIVER IS DIRECTLY CONNECTED TO THE AC POWER LINE.**

**SAFETY-RELATED COMPONENT WARNING!!**

**COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL FOR SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY. CIRCUIT ADJUSTMENTS THAT ARE CRITICAL FOR SAFE OPERATION ARE IDENTIFIED IN THIS MANUAL. FOLLOW THESE PROCEDURES WHENEVER CRITICAL COMPONENTS ARE REPLACED OR IMPROPER OPERATION IS SUSPECTED.**

**(ATTENTION)**

**APRES AVOIR DECONNECTE LE CAP DE L'ANODE, COURT-CIRCUITER L'ANODE DU TUBE CATHODIQUE ET CELUI DE L'ANODE DU CAP AU CHASSIS METALLIQUE DE L'APPAREIL, OU AU COUCHE DE CARBONE PEINTE SUR LE TUBE CATHODIQUE OU AU BLINDAGE DU TUBE CATHODIQUE.**

**ATTENTION!!**

**AFIN D'EVITER TOUT RESQUE D'ELECTROCUTION PROVENANT D'UN CHÁSSIS SOUS TENSION, UN TRANSFORMATEUR D'ISOLEMENT DOIT ETRE UTILISÉ LORS DE TOUT DÉPANNAGE. LE CHÁSSIS DE CE RÉCEPTEUR EST DIRECTEMENT RACCORDÉ À L'ALIMENTATION SECTEUR.**

**ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!**

**LES COMPOSANTS IDENTIFIÈS PAR UNE TRAME ET PAR UNE MARQUE ⚠ SUR LES SCHÉMAS DE PRINCIPE, LES VUES EXPLOSÉES ET LES LISTES DE PIECES SONT D'UNE IMPORTANCE CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT. NE LES REMPLACER QUE PAR DES COMPOSANTS SONY DONT LE NUMÉRO DE PIÉCE EST INDIQUÉ DANS LE PRÉSENT MANUEL OU DANS DES SUPPLÉMENTS PUBLIÉS PAR SONY. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIES DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNEMENT EST SUSPECTÉ.**

# SECTION 1
# GENERAL

The operating instruction mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual. (Part no: 3-810-687-22)

## Welcome!

Thank you for purchasing the Sony Trinitron® Color TV. Here are some of the features you will enjoy with your TV:

- On-screen menus that let you set the picture quality, sound, and other settings.
- Picture-in-Picture (PIP) that allows you to watch another TV channel, video or cable image as a window picture.
- Surround system that simulates the sound quality of a concert hall or movie theater (*KV-27S25/27S35/29RS25/29RS25C/32S25/32S35/32TW25 only*).
- SRS (SOUND RETRIEVAL SYSTEM) that allows you to receive realistic sound that recaptures audio "clues" originally present but masked in the recording process so that the action seems to happen all around you (*KV-27V25/27V35/29V35C/29V65M/29V75M/32V25/32V35/34V35C/35V35/35V45/35V75 only*).
- LightSensor™ that automatically adjusts the brightness of the picture (*KV-27V25/27V35/29V35C/29V65M/29V75M/32V25/32V35/34V35C/35V35/35V45/35V75 only*).
- S-Link™ that allows you to automatically change the TV's input mode, turn on the VCR, and play a tape by just pressing the VCR's play button (*KV-27V25/27V35/29V35C/29V65M/29V75M/32V25/32V35/34V35C/35V35/35V45/35V75 only*). This feature is originally designed by Sony.

## Checking your model number

The instructions in this manual are for the eighteen models listed below. Before you start reading, check your model number by looking at the rear of your TV. The KV-27S25 is the model used for illustration purposes. Any differences in operation are clearly indicated in the text, for example, "*KV-27S25 only.*"

Instructions in this manual are based on the remote commander. You can also use the controls on the TV if they have the same name as those on the remote commander.

### Feature packages

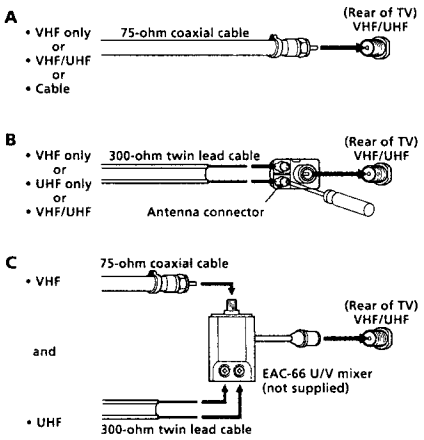
| Model number | One-tuner PIP | Two-tuner PIP | S-Link/LightSensor/SRS/Clock/Timer | Tilt correction |
|---|---|---|---|---|
| **KV-27V20** | • | | | |
| KV-27S35 | | • | | |
| KV-27V25 | • | | • | |
| KV-27V35 | | • | • | |
| **KV-29V20** | • | | | |
| KV-29RS25C | • | | | |
| KV-29V35C | | • | • | |
| KV-29V65M | • | | • | |
| KV-29V75M | | • | • | |
| KV-32S25 | • | | | |
| KV-32S35 | | • | | |
| KV-32TW25 | • | | | |
| KV-32V25 | • | | • | |
| KV-32V35 | | • | • | |
| KV-34V35C | | • | • | |
| KV-35V35 | | • | • | • |
| KV-35V45 | | • | • | • |
| KV-35V75 | | • | • | • |

## Step 1: Hookup

Although you can use either an indoor or outdoor antenna with your TV, we recommend that you connect an outdoor antenna or a cable TV system to get better picture quality.

### How to connect different types of cables

The illustrations below show examples of connecting cables to the TV directly.



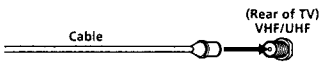

**Notes**

- Most VHF/UHF combination antennas have a signal splitter Remove the splitter before attaching the appropriate connector.
- If you use the U/V mixer, snow and noise may appear in the picture when viewing cable TV channels over 37.

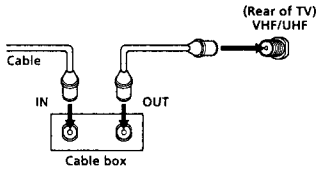
### Connecting an antenna/cable TV system without a VCR

If your cable company requires you to connect a cable box, make the connection as follows:

**Cable or antenna**

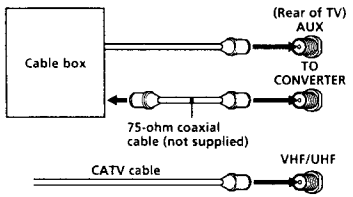



**Cable box**




**Cable box and cable**

■ ***KV-27S35/27V35/29V35C/29V75M/32S35/32V35/34V35C/35V35/35V45/35V75 only***




Pay cable TV systems use scrambled or encoded signals requiring a cable box* in addition to the normal cable connection.

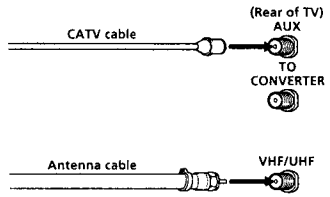
* The cable box will be supplied by the cable company

**Note**

- You cannot watch the signal through AUX connector as a window picture.

**Cable and antenna**

■ ***KV-27S35/27V35/29V35C/29V75M/32S35/32V35/34V35C/35V35/35V45/35V75 only***




**Note**

- Do not connect anything to the TO CONVERTER connector in this case.

## Connecting an antenna/cable TV system with a VCR

To connect your VCR to the TV, first check the model number of your TV and select the corresponding connection. For details on connection, see the instruction manual of your VCR.

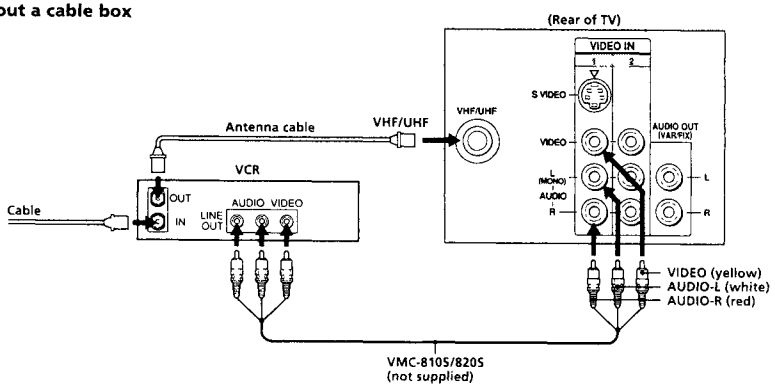
**In order to operate PIP, a VCR must be connected to your TV and turned on (*KV-27S25/27V25/29RS25/29RS25C/29V65M/32S25/32TW25/32V25 only*).**

Before making the connection, disconnect the AC power cords of the equipment to be connected.

After making these connections, you will be able to do the following:

- View the playback of video tapes
- Record one TV program while viewing another program
- Watch two TV programs at once using PIP

### Without a cable box

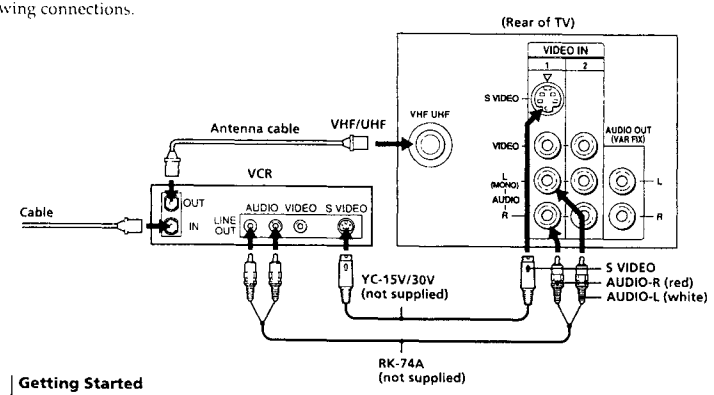



**Note**

- To connect a monaural VCR, connect the audio output of the VCR to AUDIO-L (mono) of VIDEO 1 IN on the TV.

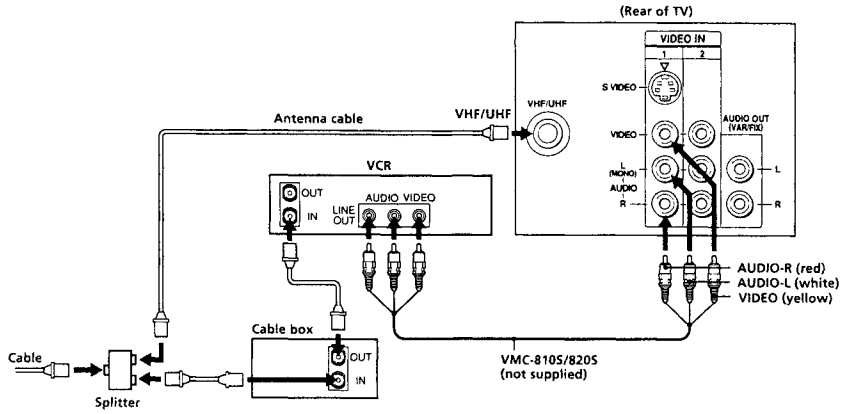
### To an S video equipped VCR without a cable box

If your VCR has an S video output jack, make the following connections.





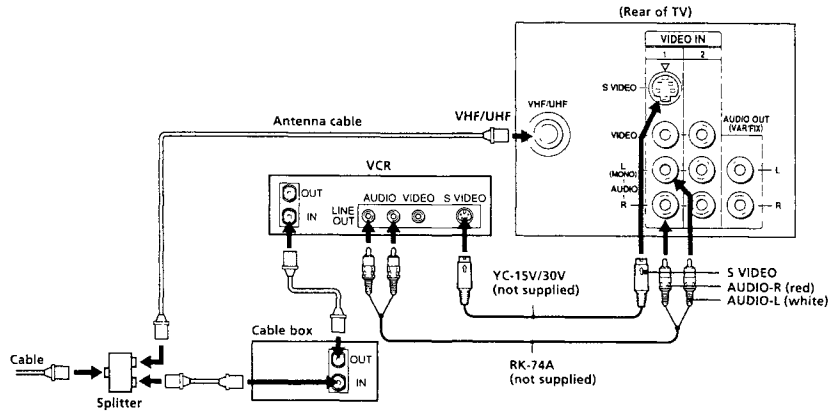

### With a cable box




**Note**

- To connect a monaural VCR, connect the audio output of the VCR to AUDIO-L (mono) of VIDEO 1 IN on the TV.

### To an S video equipped VCR with a cable box



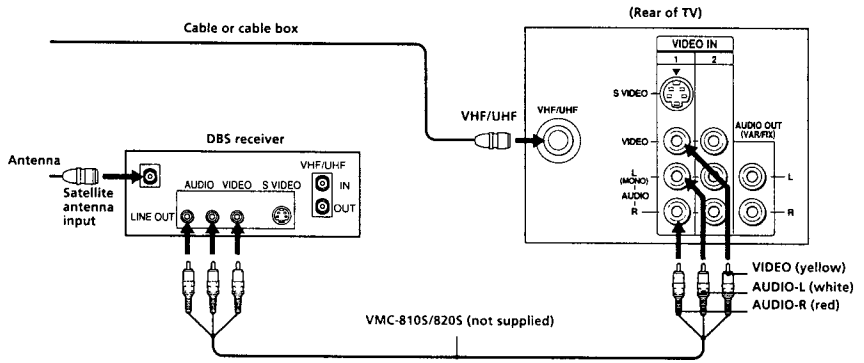

**Note**

- Video signals are composed of Y (luminance) and C (chroma) signals. The S connection sends the two signals separately preventing degradation, and gives better picture quality compared to conventional connections.

## Connecting a DBS receiver

For connection details, see the instruction manual of the DBS (Digital Broadcasting Satellites) receiver.

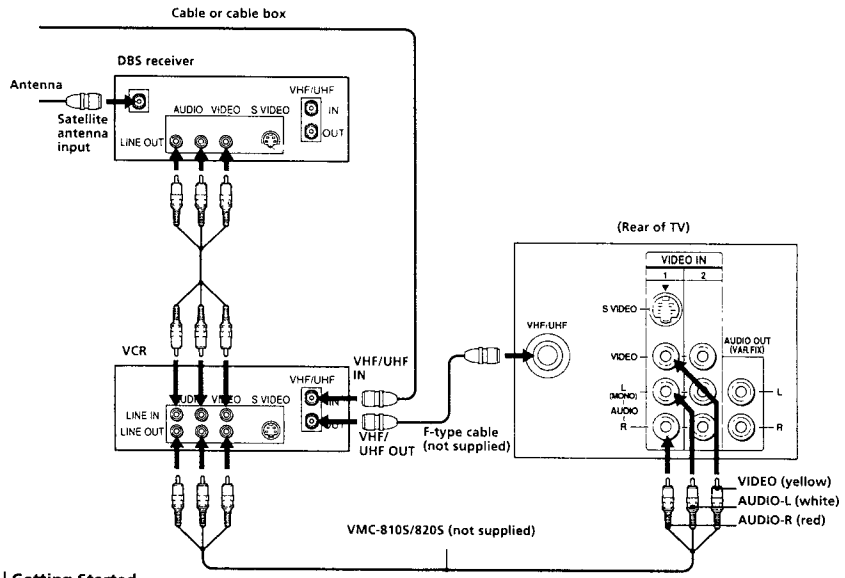
### To a TV




**Note**

- You can use the S VIDEO jack or the composite video jack for the video connection.

### To a TV and VCR



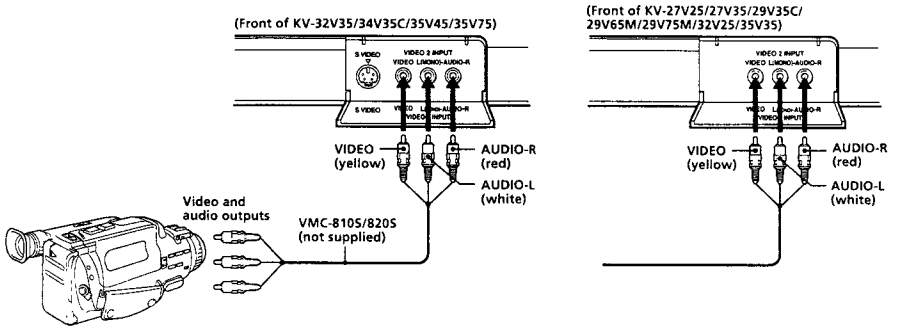





## Connecting a camcorder

■ ***KV-27V25/27V35/29V35C/29V65M/29V75M/32V25/32V35/34V35C/35V35/35V45/35V75 only***

This connection is convenient for viewing a camcorder picture.

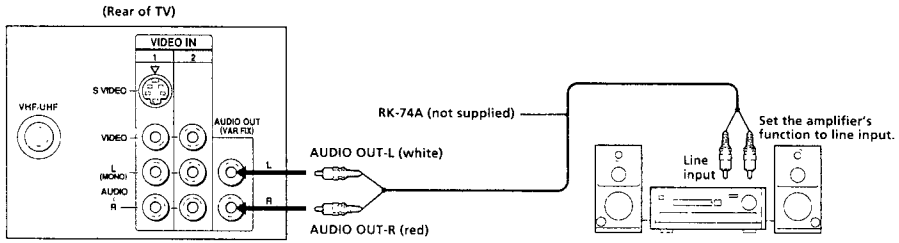



**Note**

- To connect a monaural camcorder, connect the audio output of the camcorder to AUDIO-L (mono) of VIDEO 2 INPUT on the TV.

## Connecting an audio system

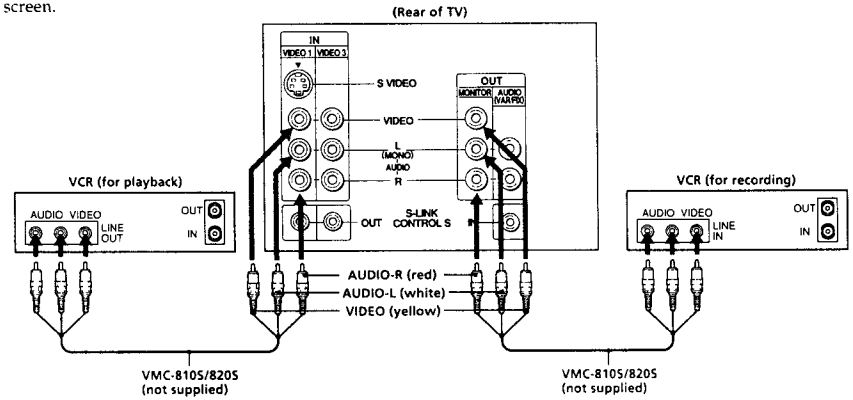
When connecting audio equipment, see page **27** for more information.



## Connecting two VCRs for tape editing using MONITOR OUT

■ ***KV-27V25/27V35/29V35C/29V65M/29V75M/32V25/32V35/34V35C/35V35/35V45/35V75 only***

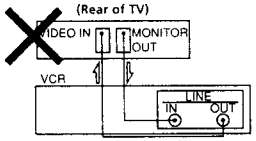
MONITOR OUT allows you to record a program that is on the screen.




The above type of connection should only be used when you connect from the line input of one VCR, and from the line output of a second VCR.

**Notes**

- Do not change the input signal while editing through MONITOR OUT, or the output signal will also change.
- You can use the S video jack to connect a VCR for playback and the composite video jack to connect a VCR for recording.
- When connecting a single VCR to the TV, do not connect the MONITOR OUT jacks at the rear of the TV to the VCR's line input, while at the same time connecting from the TV's VIDEO IN jacks to the VCR's line output, as shown below.




## Using the S-Link function

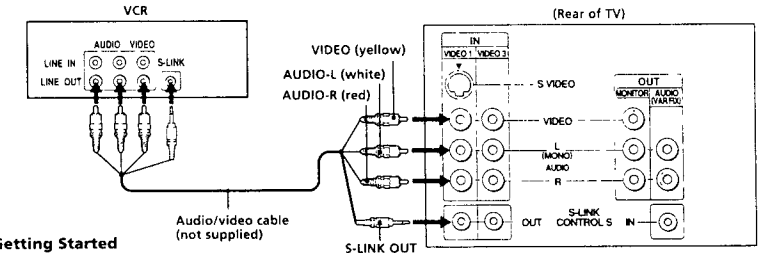
■ ***KV-27V25/27V35/29V35C/29V65M/29V75M/32V25/32V35/34V35C/35V35/35V45/35V75 only***

The S-Link feature allows you to operate the TV and VCR with the S-Link function in the following ways:

- When you press the VCR's play button, the TV's input mode is automatically changed to video, and the VCR starts playing a tape.
- You can turn off the TV and VCR together using the SYSTEM OFF button (see page **35** for details).

**Notes**

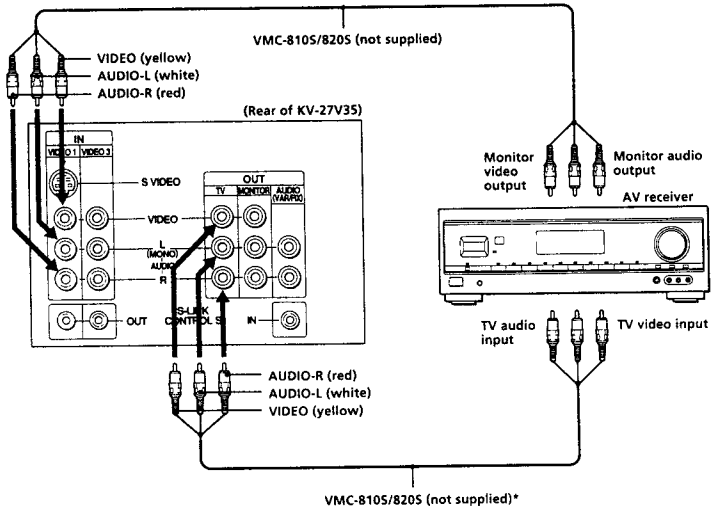
- The TV may malfunction if you connect the S-Link cable to the TV without connecting the other end of the cable to the VCR.
- When making the S-Link connection, be sure to insert all the connectors firmly.






## Connecting an AV receiver

Connect an optional AV receiver to the VIDEO 1 IN jacks at the rear of the TV.

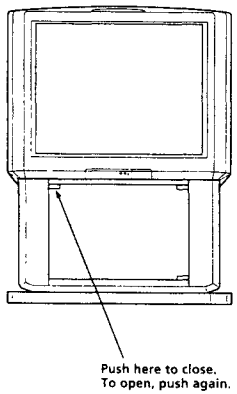



* *(KV-27V35/29V35C/29V75M/32V35/34V35C/35V45/35V75 only)*
Make this connection if your TV has the TV OUT jacks. When you connect an AV receiver to the TV using the AV receiver's TV input jacks, it is recommended to set VIDEO 1 IN's video label to "RECEIVER" (see page **32** for details).

# Step 2: Installing the glass door and adjusting the shelf

■ ***KV-32TW25/35V75 only***

Follow these instructions to install the glass door and adjust the shelf.

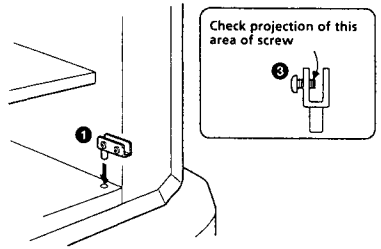



Parts List

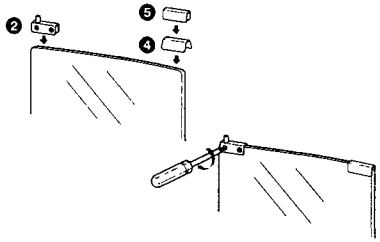
| | | |
|---|---|---|
| ❶ Bottom hinge | | 1 |
| ❷ Top hinge | | 1 |
| ❸ Screw 4 × 4 | | 4 |
| ❹ Plate pad | | 1 |
| ❺ Plate | | 1 |

## Installing the glass door

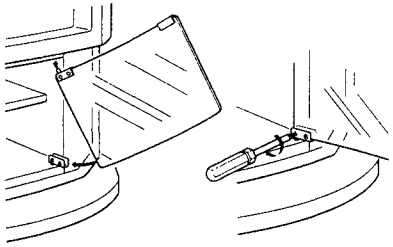
**1 Check that the projection of the screw through the hinge allows for proper installation of the hinge to the glass door, and then insert the bottom hinge ❶ into the hole located at the bottom, right side of cabinet.**




**2 Attach the top hinge ❷ to the right side of the glass door, tighten the screws snugly, but do not overtighten. Attach the plate pad ❹ to the left side and push the plate ❺ over the plate pad.**




**3 Push the top, glass door hinge into the top, right bushing and gently slide the glass door into the bottom hinge. Adjust the glass door until level, and tighten the hinge screws.**

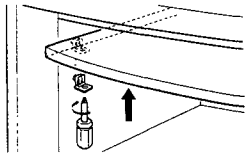


**Note**

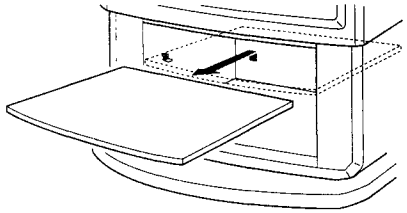
- The glass door is made of tempered glass. Although it is more shock-resistant than ordinary glass, tempered glass may shatter if it is dropped or receives a sudden shock.

## Adjusting the shelf

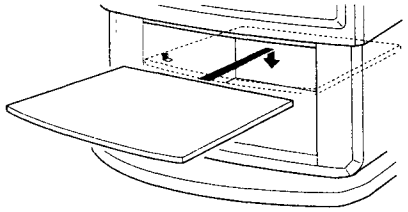
**1 Unlock the four shelf supports with a medium Philips head screwdriver. Turn the screwdriver 90° to unlock the shelf supports.**



**2 Gently slide the shelf up and out.**



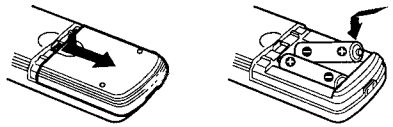
**3 Insert shelf supports in the appropriate holes. Slide shelf in, align the shelf grooves with the shelf supports, and slide the shelf down.**



# Step 3: Setting up the remote commander

## Inserting batteries

Insert two size AA (R6) batteries (supplied) by matching the + and – on the battery to the diagram inside the battery compartment.



**Notes**

- Under normal conditions, batteries will last up to six months. If the remote commander does not operate properly or the indicators of the buttons on the remote commander do not light up, the batteries may be worn out. When replacing batteries, replace both of them with new ones.
- Do not mix old batteries with new ones or mix different types of batteries together.
- If the electrolyte inside the battery should leak, wipe the contaminated area of the battery compartment with a cloth and replace the old batteries with new ones. To prevent the electrolyte from leaking, remove the batteries when you don't plan to use the remote commander for a long period of time.
- Do not handle the remote commander roughly. Do not drop it, step on it or let it get wet.
- Do not place the remote commander in direct sunlight, near a heater, or where the humidity is high.

## Getting to know buttons on the remote commander

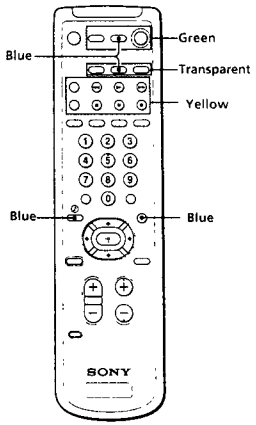
Names of buttons on the remote commander are indicated in different colors to represent the available functions.

**Button color**

Transparent (light up) ..... TV/VCR/DBS/Cable box function buttons. Press the appropriate function button first to change the remote commander's function.
Green ..... Buttons relevant to power operations.

**Label color**

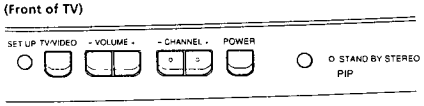
White ..... TV/VCR/DBS/Cable box operation buttons.
Yellow ..... PIP operation buttons.
Blue ..... DBS operation buttons.




# Step 4: Setting up the TV automatically (AUTO SET UP)

You can set up your TV easily by using the AUTO SET UP feature. It presets all the receivable channels.
To set up the TV manually, see "Setting cable TV on or off" (page **17**) and "Presetting channels"(page **17**).

(Front of TV)




For KV-27V35/29V35C/29V75M/32V35/34V35C/35V45/35V75, the control buttons are located on the top of the TV.

**Before you start using AUTO SET UP, be sure to connect the antenna or cable to the TV (see page 5).**

**1 Press POWER to turn on the TV.**

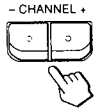
The AUTO SET UP screen appears.

**Note**

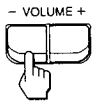
- The AUTO SET UP screen appears whenever you press the POWER button if you do not execute AUTO PROGRAM.

**2** *(Except Canadian models)*

**Press CHANNEL + to select English screens or CHANNEL – to select Spanish screens.**




**3 Press VOLUME –.**



"AUTO PROGRAM" appears on the screen and the TV starts scanning and presetting channels automatically. When all the receivable channels are stored, "AUTO PROGRAM" disappears and the lowest numbered channel is displayed. If the TV receives cable TV channels, CABLE is set to ON automatically.

**To perform AUTO SET UP again**

1 Press SET UP on the TV.
2 *(Except Canadian models)*
Press CHANNEL + or CHANNEL – to select the language.
3 Press VOLUME –.
The picture and sound settings will be set to the factory preset conditions.
4 Press CHANNEL +.
"AUTO PROGRAM" appears on the screen and the TV starts scanning and presetting channels.
5 Press CHANNEL – to exit the AUTO SET UP menu.

**To exit AUTO PROGRAM**

Press any button

**Notes**

- If the TV is set to a video input, you cannot execute AUTO SET UP. Press TV (black button) so that a channel number appears
- Using the AUX connector, press TV (black button) first and make sure that "AUX" is displayed beside the channel number on the screen. Then follow the procedure above to perform AUTO SET UP. *(KV-27S35/27V35/29V35C/29V75M/32S35/32V35/34V35C/35V35/35V45/35V75 only)*

**To browse the main functions (DEMO)**

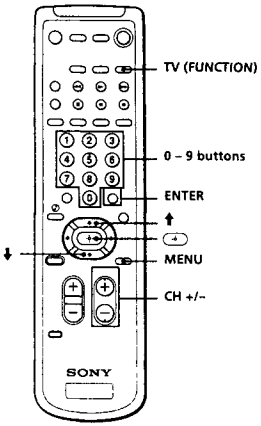
Press TV/VIDEO on the TV in step 3. The functions and menus are displayed one by one.

**To exit DEMO**

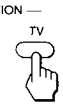
Press any button

## Erasing or adding channels

After AUTO SET UP, you can erase unnecessary channels or add the channels you want. Preset channels during the day rather than late at night, when some channels may not be broadcasting.




**1 Press TV (FUNCTION).**

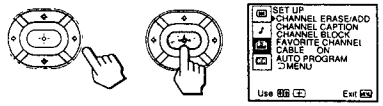



**2 Press MENU.**

The main menu appears.

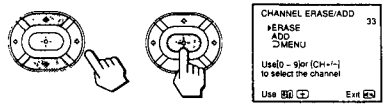
**3 Press ↑ or ↓ to select 🧰, and press ⊕.**

The SET UP menu appears.




**4 Press ↑ or ↓ to select CHANNEL ERASE/ADD, and press ⊕.**

The CHANNEL ERASE/ADD menu appears.

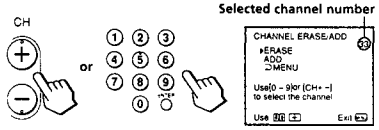



**5 Erase and/or add channels:**

***To erase an unwanted channel***

(1) Make sure the cursor (▶) is beside ERASE.

(2) Press CH +/– or the 0 – 9 buttons to select the channel you want to erase, and press ENTER.



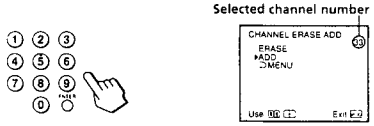

(3) Press ⊕.

The "–" indication appears beside the channel number, showing that the channel is erased from the preset memory.

***To add a channel that you want***

(1) Press ↑ or ↓ to move the cursor (▶) to ADD.

(2) Press the 0 – 9 buttons to select the channel you want to add, and press ENTER.




(3) Press ⊕.

The "+" indication appears beside the channel number, showing that the channel is added to the preset memory.

**6 To erase and/or add other channels, repeat step 5.**

**7 Press MENU to return to the original screen.**

**Notes**

- If you erase or add a VHF or UHF channel, the cable TV channel with the same number is also erased or added, and vice versa.
- Erasing and adding channels is also available for the AUX input. *(KV-27S35/27V35/29V35C/29V75M/32S35/32V35/34V35C/35V35/35V45/35V75 only)*

## Setting cable TV on or off

If you have connected the TV to a cable TV system, set CABLE to ON (the factory setting). If not, set CABLE to OFF. You do not have to do this procedure if you execute AUTO SET UP (page **15**). Do this procedure only when you want to set it manually.

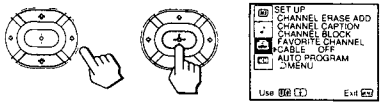
**1 Press MENU.**

**2 Press ↑ or ↓ to select 🧰, and press ⊕.**

**3 Set CABLE to ON or OFF:**

(1) Press ↑ or ↓ to move the cursor (▶) to CABLE, and press ⊕.

(2) Press ↑ or ↓ to select ON or OFF, and press ⊕.




**4 Press MENU to return to the original screen.**

**Note**

- If CABLE appears in gray, the TV is set to a video input and you cannot select CABLE. Press TV (black button) so that a channel number appears

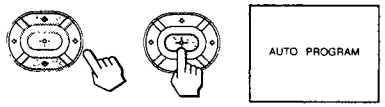
## Presetting channels

You can preset TV channels easily by using the AUTO PROGRAM feature. You do not have to do this procedure if you execute AUTO SET UP (page **15**). Do this procedure only when you want to set it manually.

**1 Press MENU.**

**2 Press ↑ or ↓ to select 🧰, and press ⊕.**

**3 Press ↑ or ↓ to select AUTO PROGRAM, and press ⊕.**




"AUTO PROGRAM" appears on the screen and the TV starts scanning and presetting channels automatically. When all the receivable channels are stored, "AUTO PROGRAM" disappears and the lowest numbered channel is displayed.

**4 Press MENU to return to the original screen.**

**To exit AUTO PROGRAM**

Press any button.

**Notes**

- If the AUTO PROGRAM menu appears in gray, the TV is set to a video input and you cannot select AUTO PROGRAM. Press TV (black) so that a channel number appears.
- Presetting channels is also available for the AUX input. *(KV-27S35/27V35/29V35C/29V75M/32S35/32V35/34V35C/35V35/35V45/35V75 only)*

# Changing the menu language

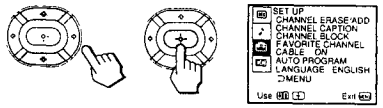
■ ***Except Canadian models***

If you prefer Spanish to English, you can change the menu language. You do not have to do this procedure if you select the language during AUTO SET UP (page 15).

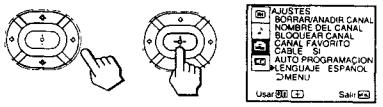
**1 Press MENU.**

**2 Press ↑ or ↓ to select ⚙, and press ⊕.**

**3 Press ↑ or ↓ to select LANGUAGE, and press ⊕.**




**4 Press ↑ or ↓ to select your favorite language, "ENGLISH" or "ESPAÑOL," and press ⊕.**




**5 Press MENU to return to the original screen.**

**Note**

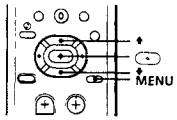
- Certain parts of the Spanish menus remain in English.

# Adjusting the tilt of the picture

## (TILT CORRECTION)

■ ***KV-35V35/35V45/35V75 only***

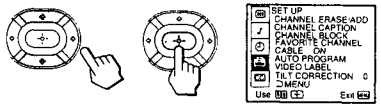
You can adjust the tilt of the picture if it is not aligned with the TV screen. Misalignment may be caused by the direction of the earth's magnetic fields in relation to the position of the TV.




**1 Press MENU.**

**2 Press ↑ or ↓ to select ⚙, and press ⊕.**

**3 Press ↑ or ↓ to select TILT CORRECTION, and press ⊕.**



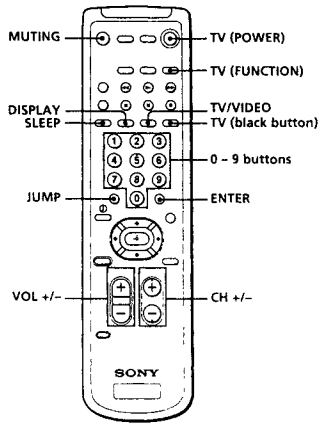

**4 Press ↑ or ↓ to adjust the tilt between +5 and -5.**

**5 Press MENU to return to the original screen.**

**Notes**

- If your house is located near a high-voltage cable or is of reinforced concrete, you may not be able to correct the tilt of the picture properly. Consult your nearest Sony dealer.
- If there are large speakers near the TV, the tilt of the picture cannot be corrected properly. Place the TV away from the speakers.

# Watching the TV




**1 Press TV (POWER) to turn on the TV.**

If "VIDEO" appears on the screen, press TV (black button) so that a channel number appears.

**2 Press TV (FUNCTION).**

Once you press TV (FUNCTION), the TV function is set unless another function button is pressed.

**3 Select the channel you want:**

***To select a channel directly***

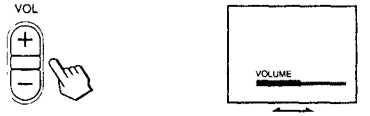
Press the 0 - 9 buttons, and press ENTER.

***To scan through channels***

Press CH +/- until the channel you want appears.

The channel can also be selected without pressing ENTER.

**4 Press VOL +/- to adjust the volume.**




## Switching quickly between two channels

You can use the JUMP button to switch or "jump" back and forth between two channels.

**Press JUMP.**

Pressing JUMP again switches back the channel.

**Note**

- You cannot jump to channels you scanned through using the CH +/- buttons.

## Muting the sound

**Press MUTING.**

"MUTING" appears on the screen.

To restore the sound, press MUTING again, or press VOL +.

## Displaying on-screen information

**Press DISPLAY repeatedly until the desired display appears.**
Each time you press DISPLAY, the display changes as follows:

Status display* → XDS** → Caption Vision*** → DISPLAY OFF →

* Channel number, the current time (only for available models), channel caption (if set), and MTS mode (if SAP is selected) are displayed. SAP indication disappears after three seconds.
** Some programs are broadcast with XDS (Extended Data Service) which shows a network name, program name, program type, program length, call letters, and time of the show. When you select XDS with the DISPLAY button, this information will be displayed on the screen if the broadcaster offers this service.
*** Some programs are broadcast with Caption Vision. When you select Caption Vision with the DISPLAY button, Caption Vision will be displayed on the screen if the broadcaster offers this service. (See page **33** for selecting Caption Vision.)

To cancel the display, press DISPLAY repeatedly until "DISPLAY OFF" appears. "DISPLAY OFF" goes off after three seconds.

## Setting the Sleep Timer

The TV stays on for the length of time you specify and then shuts off automatically.
**Press SLEEP repeatedly until the time (minutes) you want appears.**
Each time you press SLEEP, the time changes as follows:

30 → 60 → 90 → SLEEP OFF →

To cancel the Sleep Timer, press SLEEP repeatedly until "SLEEP OFF" appears, or turn off the TV.

## Watching a video input picture

**Press TV/VIDEO repeatedly until the desired video input appears.**
Each time you press TV/VIDEO, the display changes as follows:

■ ***KV-27S25/27S35/29RS25/29RS25C/32S25/32S35/32TW25 only***

TV → VIDEO 1 → VIDEO 2 →

■ ***KV-27V25/27V35/29V35C/29V65M/29V75M/32V25/32V35/34V35C/35V35/35V45/35V75 only***

TV → VIDEO 1 → VIDEO 2 → VIDEO 3 →

To return to the TV picture, press TV (black button) so that a channel number appears.

## Changing the VHF/UHF input to the AUX input

■ ***KV-27S35/27V35/29V35C/29V75M/32S35/32V35/34V35C/35V35/35V45/35V75 only***

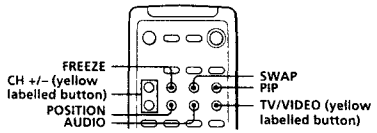
**Press TV (black button).**

Pressing TV (black button) again switches back to the previous input.

# Watching two programs at a time —PIP

The Picture-in-Picture (PIP) feature allows you to watch both the main picture and a window picture simultaneously.

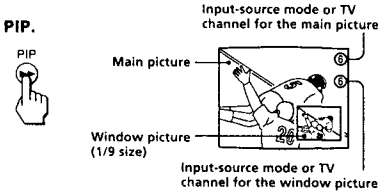
For KV-27S25/27V25/29RS25/29RS25C/29V65M/32S25/32TW25/32V25, your TV must be connected to a VCR to enjoy this feature. See "Connecting an antenna/cable TV system with a VCR" (page **6**) for connections. In order to operate PIP, your VCR must be turned on.



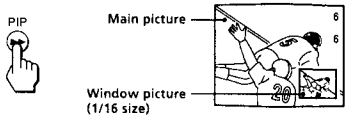

Use the yellow labelled buttons for PIP operations.

## Displaying a window picture

**Press PIP.**


PIP
Input-source mode or TV channel for the main picture
Main picture
Window picture (1/9 size)
Input-source mode or TV channel for the window picture

**Press PIP again to display a smaller window picture.**

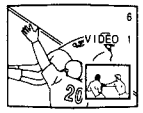



To remove the window picture, press PIP again.

**Note**
- The window picture may be affected by the condition of the main picture.

## Changing the window picture input mode

**Press TV/VIDEO (yellow labelled button) to select the input mode.**
Each time you press TV/VIDEO (yellow labelled button), "TV," "VIDEO 1," "VIDEO 2," and "VIDEO 3 (*KV-27V25/27V35/29V35C/29V65M/29V75M/32V25/32V35/34V35C/35V35/35V45/35V75 only*)" appear in sequence.

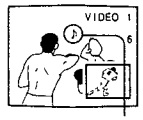



A window picture will appear in the same input mode as the last time you used PIP.

**Note**
- If you use one of the connections from page **6**, your PIP input source is a VCR. If you use one of the connections from page **7**, your PIP input source is a VCR or cable box.

## Listening to the sound of the window picture

**Press AUDIO.**
The ♪ display appears next to the PIP channel number for a few seconds, indicating that the window picture sound is being received.



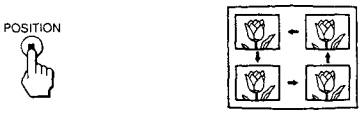

To restore the main picture sound, press AUDIO again. The ♪ display moves to the main picture channel number.

## Changing TV channels in the window picture

**Press CH +/– (yellow labelled button).**

## Changing the position of the window picture

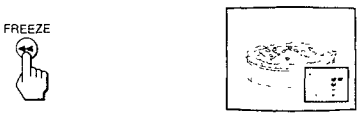
**Press POSITION.**
Each time you press POSITION, the window picture will move counterclockwise on the screen.




## Freezing the window picture

This feature is useful when you want to write down a recipe from a cooking program, a displayed address, or a phone number for example.

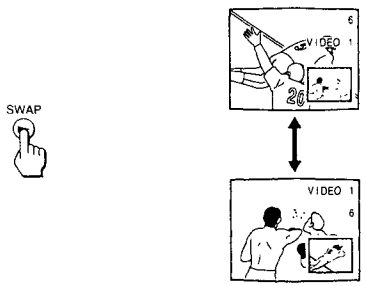
**Press FREEZE.**




To restore the normal screen, press FREEZE again.

## Swapping the main and window pictures

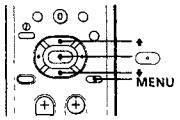
**Press SWAP.**
Each time you press SWAP, the images from the main and window pictures switch places along with the sound.




**Note**
- The channels being received through the AUX jack cannot be displayed as a window picture. *(KV-27S35/27V35/29V35C/29V75M/32S35/32V35/34V35C/35V35/35V45/35V75 only)*

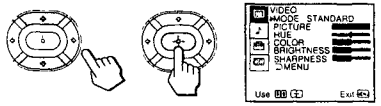
# Adjusting the picture (VIDEO)

When watching TV programs, you can adjust the picture to suit your taste.
You can adjust the picture of video input(s) as well. These settings are stored separately from those for the TV picture.




**1 Press MENU.**

**2 Press ↑ or ↓ to select ⊡, and press ⊕.**




**3 Select the item you want to adjust.**
**For example:**
(1) To adjust the brightness, press ↑ or ↓ to move the cursor (▶) to BRIGHTNESS.

(2) Press ⊕.

**4 Adjust the selected item:**
(1) Press ↑ or ↓ to adjust the item.

(2) Press ⊕.
The new setting appears in the VIDEO menu.

For details on each item, see "Description of adjustable items" below.

**5 To adjust other items, repeat steps 3 and 4.**

**6 Press MENU to return to the original screen.**

### Description of adjustable items

| Item | Press ↑ to | Press ↓ to |
|---|---|---|
| PICTURE | Decrease picture contrast and give soft color. | Increase picture contrast and give vivid color |
| HUE | Make picture tones become purplish. | Make picture tones become greenish |
| COLOR | Decrease color intensity. | Increase color intensity |
| BRIGHTNESS | Darken the picture. | Brighten the picture |
| SHARPNESS | Soften the picture. | Sharpen the picture. |

### To restore the factory settings

Press RESET while the VIDEO menu is displayed.
All the settings are restored to the factory settings.

# Selecting the video mode (VIDEO)

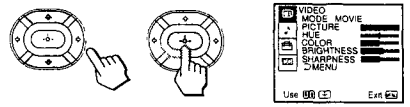
The video mode feature allows you to choose three different modes of picture settings. Choose the one that best suits the type of program that you want to watch.

**1 Press MENU.**

**2 Press ↑ or ↓ to select ⊡, and press ⊕.**

**3 Press ↑ or ↓ to select MODE, and press ⊕.**

**4 Press ↑ or ↓ to select STANDARD, MOVIE, or SPORTS mode, and press ⊕.**




| Choose | To |
|---|---|
| STANDARD | Receive a standard picture. |
| MOVIE | Receive a finely detailed picture. |
| SPORTS | Receive a vivid, bright picture. |

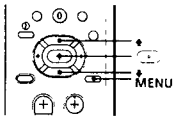
**5 Press MENU to return to the original screen.**

**Note**
- The settings for these modes can be adjusted in the VIDEO menu.

# Adjusting picture brightness automatically (LIGHTSENSOR)

■ ***KV-27V25/27V35/29V35C/29V65M/29V75M/32V25/32V35/34V35C/35V35/35V45/35V75 only***

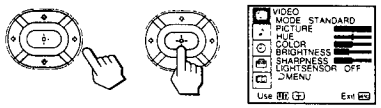
The LightSensor feature adjusts the brightness of the picture automatically according to the ambient brightness.



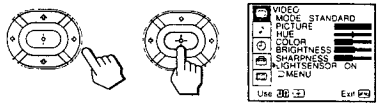

**1 Press MENU.**

**2 Press ↑ or ↓ to select ⚙, and press ⊕.**

**3 Press ↑ or ↓ to select LIGHTSENSOR, and press ⊕.**




**4 Press ↑ or ↓ to select ON or OFF, and press ⊕.**



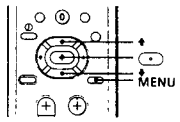

**5 Press MENU to return to the original screen.**

**Note**

- The LightSensor function may malfunction if you stand or place objects in front of the TV.

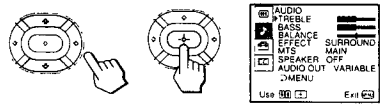
# Adjusting the sound (AUDIO)

You can adjust the TV sound to suit your taste. You can adjust the sound of the video input(s) as well. These settings are stored separately from those for the TV sound.




**1 Press MENU.**

**2 Press ↑ or ↓ to select ♪, and press ⊕.**




**3 Select the item you want to adjust.**
**For example:**
(1) To adjust bass, press ↑ or ↓ to move the cursor (▶) to BASS.

(2) Press ⊕.

**4 Adjust the selected item:**
(1) Press ↑ or ↓ to adjust the item.

(2) Press ⊕.
The new setting appears in the AUDIO menu.

For details on each item, see "Description of adjustable items" below.

**5 To adjust other items, repeat steps 3 and 4.**

**6 Press MENU to return to the original screen.**

### Description of adjustable items

| Item | Press ↑ to | Press ↓ to |
|---|---|---|
| TREBLE | Decrease the treble response. | Increase the treble response. |
| BASS | Decrease the bass response. | Increase the bass response. |
| BALANCE | Emphasize the left speaker's volume. | Emphasize the right speaker's volume. |

### To restore the factory settings

Press RESET while the AUDIO menu is displayed.

**Note**

- When SPEAKER (page 27) is OFF and AUDIO OUT (page 27) is in the FIXED condition, the volume, TREBLE, BASS, and BALANCE cannot be adjusted

# Using audio effect (EFFECT)

## Using the ♫ (audio effect) button

■ ***For KV-27S25/27S35/29RS25/29RS25C/32S25/32S35/32TW25 only***

**Press ♫.**
Each time you press the ♫ button, the display changes as follows:

SURROUND → SURROUND OFF

■ ***For KV-27V25/27V35/29V35C/29V65M/29V75M/32V25/32V35/34V35C/35V35/35V45/35V75 only***

**Press ♪.**
Each time you press the ♪ button, the display changes as follows:

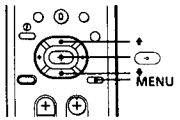
SRS → SIMULATED → EFFECT OFF

| Choose | To |
|---|---|
| SURROUND | Simulate sound reproduction with the atmosphere of a movie theater or a concert hall.<br>Surround sound is only effective for stereo programs. |
| SRS | When the program's audio signal is stereo or encoded, SRS expands the material and embraces you with dynamic three-dimensional sound. |
| SIMULATED | Receive monaural sound with a surround-like effect. |

**Note**

- To use the ♪ button function, press TV (FUNCTION).

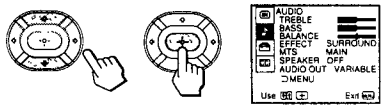
## Using the menu to set audio effect



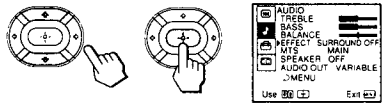

**1** **Press MENU.**

**2** **Press ↑ or ↓ to select ♪, and press ⊕.**

**3** **Press ↑ or ↓ to select EFFECT, and press ⊕.**




**4** **Press ↑ or ↓ to select the audio effect mode, and press ⊕.**

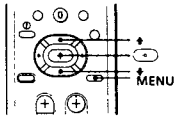



**5** **Press MENU to return to the original screen.**



# Selecting stereo or bilingual programs (MTS)

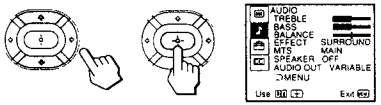
The Multichannel TV Sound (MTS) feature allows you to enjoy stereo sound or Second Audio Programs (SAP) of your choice. The initial setting is stereo sound (MAIN).



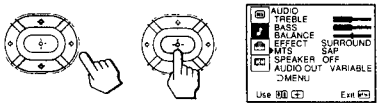

**1** **Press MENU.**

**2** **Press ↑ or ↓ to select ♪, and press ⊕.**

**3** **Press ↑ or ↓ to select MTS, and press ⊕.**




**4** **Press ↑ or ↓ to select MAIN, SAP, or MONO, and press ⊕.**




| Choose | To |
|---|---|
| MAIN | Listen to stereo sound.<br>The STEREO indicator on the TV lights up when a stereo broadcast is received. |
| SAP | Listen to bilingual programs.<br>There is no sound when the SAP signal is not broadcasting. |
| MONO | Listen to monaural sound.<br>Reduce noise during stereo broadcasts. |

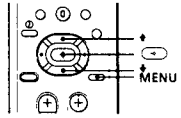
**5** **Press MENU to return to the original screen.**

**Note**

• Stereo and SAP sounds are subject to program sources.

# Setting the speaker switch (SPEAKER)

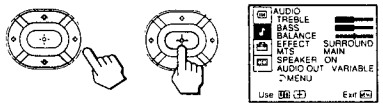
You may switch off the TV speakers when, for example, you want to listen to the sound through a stereo system.



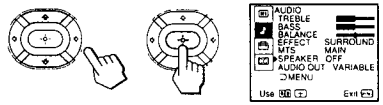

**1** **Press MENU.**

**2** **Press ↑ or ↓ to select ♪, and press ⊕.**

**3** **Press ↑ or ↓ to select SPEAKER, and press ⊕.**



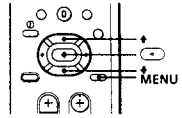

**4** **Press ↑ or ↓ to select ON or OFF, and press ⊕.**




**5** **Press MENU to return to the original screen.**

# Setting audio out (AUDIO OUT)

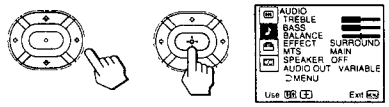
You can change AUDIO OUT to VARIABLE or FIXED when SPEAKER is set to OFF.
AUDIO OUT is variable when SPEAKER is set to ON.



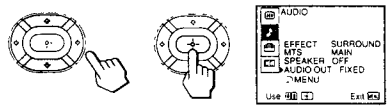

**1** **Press MENU.**

**2** **Press ↑ or ↓ to select ♪, and press ⊕.**

**3** **Press ↑ or ↓ to select AUDIO OUT, and press ⊕.**




**4** **Press ↑ or ↓ to select VARIABLE or FIXED, and press ⊕.**




**VARIABLE:** Sound output varied according to the TV settings. You can adjust the volume, bass, treble, and balance.

**FIXED:** Sound output is always fixed to a certain level. The volume, bass, treble, and balance are also fixed to the factory settings.

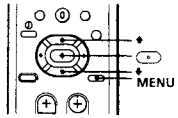
**5** **Press MENU to return to the original screen.**

**Note**

• If AUDIO OUT appears in gray, set SPEAKER to OFF

# Setting daylight saving time (DAYLIGHT SAVING)

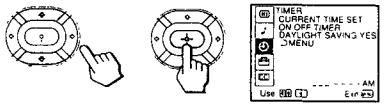
■ ***KV-27V25/27V35/29V35C/29V65M/29V75M/32V25/32V35/34V35C/35V35/35V45/35V75 only***



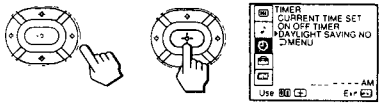

**1** **Press MENU.**

**2** **Press ↑ or ↓ to select ◴, and press ⊕.**

**3** **Press ↑ or ↓ to select DAYLIGHT SAVING, and press ⊕.**




**4** **Press ↑ or ↓ to select YES or NO, and press ⊕.**



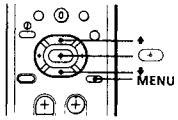

| Choose | To |
|---|---|
| YES | Set for daylight saving start. The current time automatically moves one hour ahead. |
| NO | Set for daylight saving end. |

**5** **Press MENU to return to the original screen.**

# Setting the clock (CURRENT TIME SET)

■ ***KV-27V25/27V35/29V35C/29V65M/29V75M/32V25/32V35/34V35C/35V35/35V45/35V75 only***

Setting the clock enables you to turn the TV on and off with the timer. Make sure to set daylight saving time first.




**1** **Press MENU.**

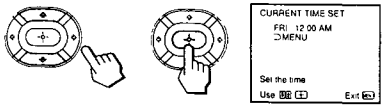
**2** **Press ↑ or ↓ to select ◷, and press ⊕.**

**3** **Press ↑ or ↓ to select CURRENT TIME SET, and press ⊕.**

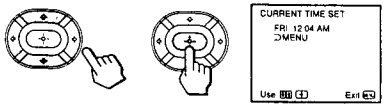
**4** **Make sure the cursor (▶) is to the left of "– –:– – AM," and press ⊕.**

**5** **Set the current time.**

(1) Press ↑ or ↓ to set the day, and press ⊕.




(2) Set the hour and minutes in the same way as in step (1). When you press ⊕ after setting the minutes, the clock starts.

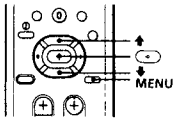



**6** **Press MENU to return to the original screen.**

# Setting the timer to turn the TV on and off (ON/OFF TIMER)

■ ***KV-27V25/27V35/29V35C/29V65M/29V75M/32V25/32V35/34V35C/35V35/35V45/35V75 only***

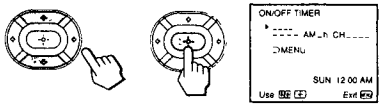
You can set the TV to turn on and off at the times you specify. Make sure the clock is set correctly. If it is not, set the clock first (page **28**).




**1** **Press MENU.**

**2** **Press ↑ or ↓ to select ◴, and press ⊕.**

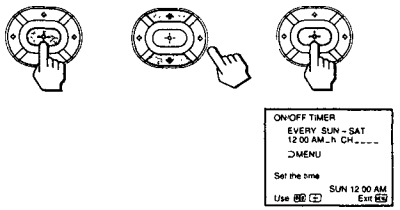
**3** **Press ↑ or ↓ to select ON/OFF TIMER, and press ⊕.**



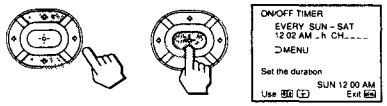

**4** **Press ⊕ and enter the ON/OFF TIMER setting.**

(1) Press ↑ or ↓ to set the day(s), and press ⊕.

Each time you press ↑ or ↓, the days cycle as follows:
EVERY SUN–SAT→EVERY MON–FRI→SUNDAY→...→SATURDAY→EVERY SUNDAY→...→EVERY SATURDAY

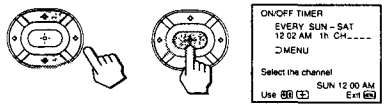



(2) Press ↑ or ↓ to set the time (hour then minutes) that you want to turn on the TV, and press ⊕.

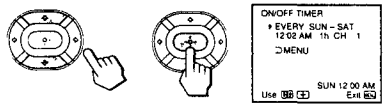



(3) Press ↑ or ↓ to set the time duration, and press ⊕.

Each time you press ↑, the time duration increases by one hour up to a maximum of six hours.




(4) Press ↑ or ↓ to select the channel, and press ⊕.




The TIMER indicator on the TV lights up.

**5** **Press MENU to return to the original screen.**

One minute before the TV turns off, the message "TV will be off soon." is displayed on the screen.

**To cancel the timer**

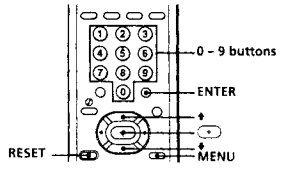
In step 3 or 4, press RESET.

**Note**

- If you unplug the TV or a power interruption occurs, the ON/OFF TIMER setting will be erased. Reset the current time, then set the timer.

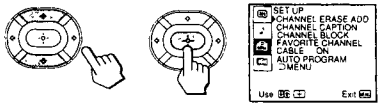
# Customizing the channel names (CHANNEL CAPTION)

You can add a caption for up to 12 channels. This feature allows you to easily identify which channel you are watching. You can make your own caption.

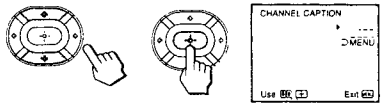



**1** **Press MENU.**

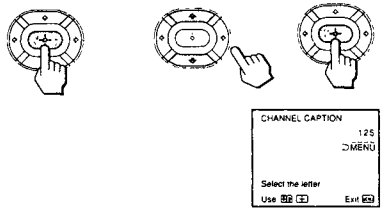
**2** **Press ↑ or ↓ to select 🧰, and press ⊕.**




**3** **Press ↑ or ↓ to select CHANNEL CAPTION, and press ⊕.**




**4** **Press ⊕ and press ↑ or ↓ to select the channel that you want to caption, and press ⊕.**

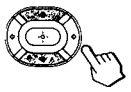



**5** **Enter the letters (up to four) to caption the channel:**

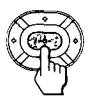
(1) Press ↑ or ↓ to select the first letter.

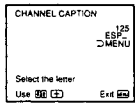
Each time you press ↑ or ↓, the letter changes as follows:

0↔1↔...↔9↔A↔B↔...↔Z↔&↔/↔_(blank space)



(2) Press ⊕.






(3) Repeat steps (1) and (2) to select the remaining letters, and press ⊕.

**6** **To caption other channels, repeat steps 4 and 5.**

**7** **Press MENU to return to the original screen.**

After you customize the channel, the channel caption appears green.

### To erase a caption

In step 5, press RESET.

### Notes

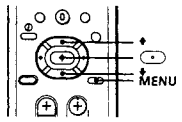
- If the CHANNEL CAPTION menu appears in gray, the TV is set to a video input, and you cannot select CHANNEL CAPTION. Press TV (black button) so that a channel number appears.
- If more than 90 seconds elapse after you press a button, the menu disappears automatically.
- The channel caption feature is not available for the AUX input.





# Blocking out a channel (CHANNEL BLOCK)

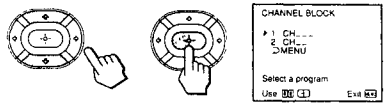
The channel block feature allows you to prevent children from watching unsuitable programs. You can block out two channels.



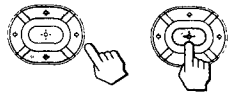

**1** **Press MENU.**

**2** **Press ↑ or ↓ to select 🧰, and press ⊕.**

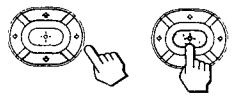
**3** **Press ↑ or ↓ to select CHANNEL BLOCK, and press ⊕.**




**4** **Press ↑ or ↓ to select 1 or 2, and press ⊕.**

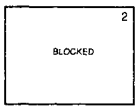


**5** **Press ↑ or ↓ to select the channel which you want to block out, and press ⊕.**



**6** **Press MENU to return to the original screen.**

When you select the blocked channel "BLOCKED" appears on the screen.




### To cancel a CHANNEL BLOCK setting

In step 4 or 5, press RESET.

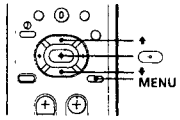
### Note

- Once you use CHANNEL BLOCK, Caption Vision and XDS of the blocked channel and the selected channel output from TV OUT/MONITOR OUT are also blocked out.

# Setting your favorite channels (FAVORITE CHANNEL)

The favorite channel feature allows your TV to memorize your favorite channels easily. If you set to AUTO, the last five channels you selected with the 0 – 9 buttons are automatically set as your favorite channels. If you want to input your own selection of channels, set to MANUAL.

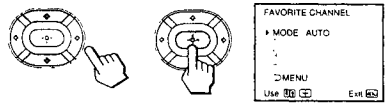
## Setting your favorite channels



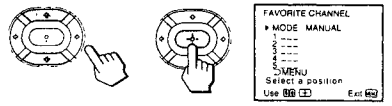

**1** **Press MENU.**

**2** **Press ↑ or ↓ to select 🧰, and press ⊕.**

**3** **Press ↑ or ↓ to select FAVORITE CHANNEL, and press ⊕.**




**4** **Press ⊕ and press ↑ or ↓ to select AUTO or MANUAL, and press ⊕.**

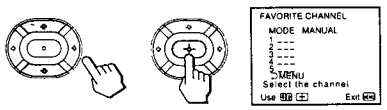



If you select AUTO, skip steps 5 and 6.
The last five channels you selected with the 0 – 9 buttons are automatically set as your favorite channels.

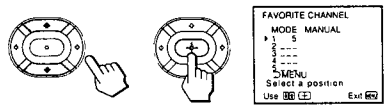
If you select MANUAL, the favorite channel numbers become white, indicating that favorite channels can be entered.


**(continued)**

**5** **Press ↑ or ↓ to select a favorite channel number, and press ⊕.**




**6** **Press ↑ or ↓ to select the channel that you want to set as your favorite channel, and press ⊕.**

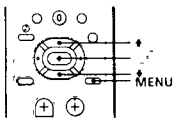



**7** **Press MENU to return to the original screen.**

**Notes**

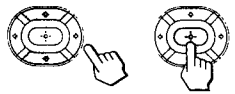
- If the FAVORITE CHANNEL menu appears in gray, the TV is set to a video input and you cannot select FAVORITE CHANNEL.
- If more than 90 seconds elapse after you press another button, the menu disappears automatically.
- The favorite channel feature is not available for the AUX input.

## Selecting your favorite channel




**1** **Press .**
The FAVORITE CHANNEL menu appears.

**2** **Press ↑ or ↓ to select the favorite channel you want to watch, and press .**
The selected channel appears on the screen.

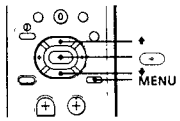


**To cancel the FAVORITE CHANNEL menu**
Press ↑ or ↓ to select "Exit," and press ⊕.

# Setting video labels (VIDEO LABEL)

■ ***KV-27V25/27V35/29V35C/29V65M/29V75M/32V25/32V35/34V35C/35V35/35V45/35V75 only***

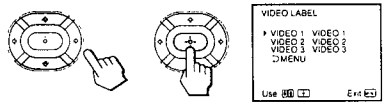
The video label feature allows you to label each input mode so that you can easily identify the connected equipment. For example, you can label VIDEO 1 IN as VHS.



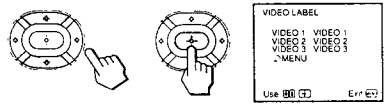

**1** **Press MENU.**

**2** **Press ↑ or ↓ to select , and press ⊕.**

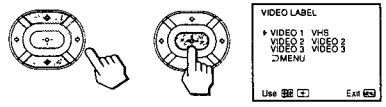
**3** **Press ↑ or ↓ to select VIDEO LABEL, and press ⊕.**




**4** **Press ↑ or ↓ to select the input mode you want to label, and press ⊕.**




**5** **Press ↑ or ↓ to select the label, and press ⊕.**




Each time you press ↑ or ↓, the label changes as follows:

VIDEO 1
VIDEO 1 ↔ VHS ↔ 8 mm ↔ BETA ↔ LD ↔ S VIDEO
↕
RECEIVER* ↔ DBS ↔ GAME

VIDEO 2
VIDEO 2 ↔ VHS ↔ 8 mm ↔ BETA ↔ LD
↕
RECEIVER* ↔ DBS ↔ GAME ↔ S VIDEO**

VIDEO 3
VIDEO 3 ↔ VHS ↔ 8 mm ↔ BETA ↔ LD
↕
RECEIVER* ↔ DBS ↔ GAME

* *KV-27V35/29V35C/29V75M/32V35/34V35C/35V45/35V75 only*

** *KV-32V35/34V35C/35V45/35V75 only*
When you connect an AV receiver to the TV using the AV receiver's TV input jacks, it is recommended to set the label to RECEIVER. When RECEIVER is selected, TV channels can be selected while the video input mode is fixed. (See page **11** for the connection.)

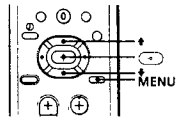
**6** **Repeat steps 4 and 5 to label other input modes.**

**Note**

- If more than 90 seconds elapse before you press another button, the menu disappears automatically.

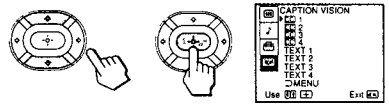
# Setting Caption Vision (CAPTION VISION)

Some programs are broadcast with Caption Vision. To display Caption Vision, select either CC1, CC2, CC3, CC4, TEXT1, TEXT2, TEXT3, or TEXT4 from the menu. CC1, CC2, CC3, or CC4 shows you a caption, that is a printed version of the dialogue or sound effects of a program. (The mode should be set to CC1 for most programs.) TEXT1, TEXT2, TEXT3, or TEXT4 shows you text, that is information presented using either half or the whole screen. It is not usually related to the program.

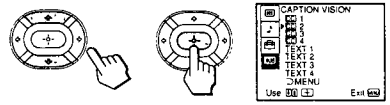



**1** **Press MENU.**

**2** **Press ↑ or ↓ to select CC, and press ⊕.**




**3** **Press ↑ or ↓ to select the caption type, and press ⊕.**




**4** **Press MENU to return to the original screen.**

**To display Caption Vision**
Press DISPLAY. (See page **20** for details.)

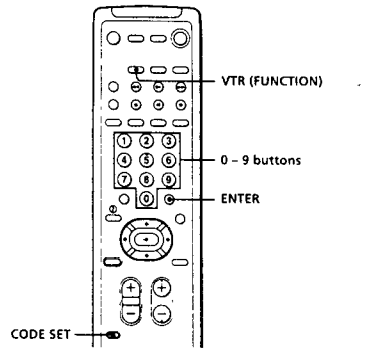
**Notes**

- Poor reception of TV programs can cause errors in Caption Vision and XDS.
  Captions may appear with a white box or other errors instead of a certain word.
- XDS, Caption Vision, and the status display cannot be used at the same time.
- For details on XDS, see page **20**.

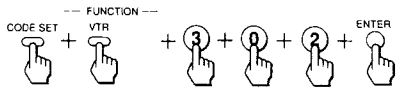
# Operating video equipment

You can use the supplied remote commander to operate Sony or non-Sony video equipment that has an infrared remote sensor. For this operation, set the manufacturer's code number.

## Setting the manufacturer's code




**Press the CODE SET, VTR (FUNCTION), and 0 – 9 buttons to enter the manufacturer's code number (see the chart), then press ENTER. For example, to operate a Sony 8 mm VCR, press CODE SET, VTR (FUNCTION), 3, 0, 2, and ENTER.**




**VCR manufacturer code numbers**

| Manufacturer | Code number |
|---|---|
| Sony | 301, 302, 303 |
| Aiwa | 338 |
| Audio Dynamic | 314, 337 |
| Bell & Howell (M. Wards) | 330, 343 |
| Brocsonic | 319 |
| Canon | 309, 308 |
| Citizen | 332 |
| Craig | 315, 302, 332 |
| Curtis Mathis | 304, 338, 309 |
| Daewoo | 341, 312, 309 |
| DBX | 314, 336, 337 |
| Dimensia | 304 |
| Emerson | 319, 320, 316, 317, 318 |
| Fisher | 330, 334, 335, 333 |
| Funai | 338 |
| General Electric | 329, 304, 309 |
| Goldstar | 332 |
| Hitachi | 306, 304, 305 |
| Instant Replay | 309, 308 |
| JC Penny | 309, 305, 304, 330, 314, 336, 337 |
| JVC | 314, 336, 337 |
| Kenwood | 314, 336, 332, 337 |
| LXI (Sears) | 332, 305, 333, 334, 330, 335 |
| Magnavox | 308, 309 |
| Marantz | 314, 336, 337 |
| Marta | 332 |
| Memorex | 309, 335 |
| Minolta | 305, 304 |
| Mitsubishi/MGA | 323, 324, 325, 326 |
| Multitech | 325, 338, 321 |
| NEC | 314, 336, 337 |
| Olympic | 309, 308 |
| Panasonic | 308, 309, 306, 307 |
| Pentax | 305, 304 |
| Philco | 308, 309 |
| Philips | 308, 309 |
| Pioneer | 308 |
| Quasar | 308, 309 |
| RCA/PROSCAN | 304, 305, 308, 309, 311, 312, 313 |
| Realistic | 309, 330, 328, 335, 324, 338 |
| Sansui | 314 |
| Singer | 315 |
| Samsung | 322, 313, 321 |
| Sanyo | 330, 335 |
| Scott | 312, 313, 321, 335, 323, 324, 325, 326 |
| Sharp | 327, 328 |
| Shintom | 315 |
| Signature 2000 (M. Wards) | 338, 327 |
| Sylvania | 308, 309, 338 |
| Symphonic | 338 |
| Tashiro | 332 |
| Tatung | 314, 336, 337 |
| Teac | 314, 336, 338, 337 |
| Technics | 309, 308 |
| Toshiba | 312, 311 |
| Wards | 327, 328, 335, 331, 332 |
| Yamaha | 330, 314, 336, 337 |
| Zenith | 331 |

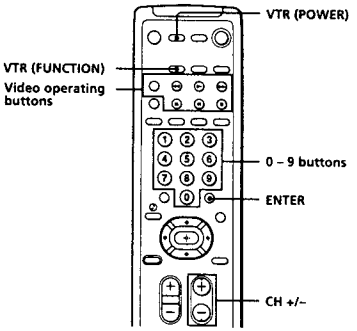
**Notes**

- If more than one code number is listed, try entering them one by one, until you come to the correct code for your equipment.
- In some rare cases, you may not be able to operate your non-Sony video equipment with the supplied remote commander. This is because your equipment may use a code that is not included with this remote commander. In this case, please use the equipment's own remote control unit.
- The code numbers for Sony equipment are assigned at the factory as follows.

| | |
|---|---|
| VHS VCR | 301 (preset code for the supplied remote commander) |
| 8 mm VCR | 302 |
| Beta, ED Beta VCRs | 303 |

- Whenever you remove the batteries — to replace them, for example — if too much time is taken, the code number may revert to the factory setting and must be reset.

## Operating video equipment




**Use the video operating buttons on the remote commander to operate the video equipment. Press VTR (FUNCTION) before operating the video equipment.**

| Operating a VCR | Buttons on the remote commander |
|---|---|
| To turn on or off | Press VTR (POWER). |
| To select a channel directly | Press the 0 – 9 buttons. |
| To change channels | Press CH +/– |
| To record | Press ► while pressing ●. First release ►, then release ●. |
| To play | Press ► |
| To stop | Press ■ |
| To fast forward | Press ▶▶. |
| To rewind the tape | Press ◀◀. |
| To pause | Press ❚❚<br>To resume normal playback, press again. |
| To search the picture forward or backward | Press ▶▶ or ◀◀ during playback<br>To resume normal playback, release the button |
| To change input mode | Press TV/VTR |

**Note**

- If the video equipment does not have a certain function, the corresponding button on this remote commander will not operate.

## Turning off the system

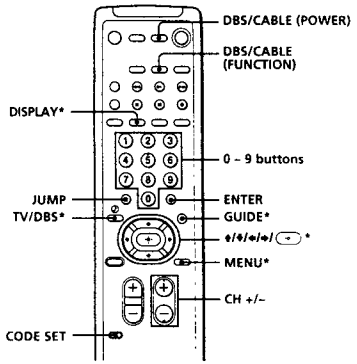
■ ***KV-27V25/27V35/29V35C/29V65M/29V75M/32V25/32V35/34V35C/35V35/35V45/35V75 only***

You can turn off the TV and Sony equipment with the S-Link function, such as a VCR, together when you make the S-Link connection (see page **10** for the connection).

**Press SYSTEM OFF.**

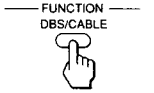
# Operating a cable box or DBS receiver

You can program the supplied remote commander to operate a cable box or DBS receiver. Follow the procedures below to set the manufacturer's code number in the remote commander.

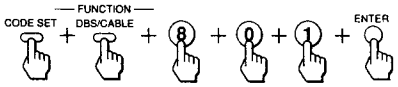



* The TV/DBS, GUIDE, DISPLAY, ↑/↓/←/→/⊙, and MENU buttons can be used only with a DBS receiver.

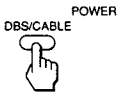
**1 Turn off the equipment you want to set up, and press DBS/CABLE (FUNCTION).**




**2 Press the CODE SET, DBS/CABLE (FUNCTION), and 0 - 9 buttons to enter the manufacturer's code number (see the chart), then press ENTER. For example, to program your remote commander to operate a Sony DBS receiver, press CODE SET, DBS/CABLE (FUNCTION), 8, 0, 1, and ENTER.**




**3 Press DBS/CABLE (POWER) to turn on the cable box or DBS receiver.**




**4 Use the cable box/DBS control buttons to check if the code number works.**
For example, to operate a cable box or DBS receiver, you can use the DBS/CABLE (POWER), JUMP, CH +/-, 0 - 9 and ENTER buttons.

**Note**
- If the cable box or DBS receiver does not have a certain function, the corresponding button on this remote commander will not operate.

### To operate the TV
Press TV (FUNCTION). Then use the TV control buttons to control the TV.

### For more details on operating the cable box or DBS receiver
Refer to the operating instructions that come with the equipment.

### If the remote commander doesn't work
- First, try repeating the setup procedures using the other codes listed for your equipment.

### Manufacturer code numbers (cable box)

| Manufacturer | Code number |
|---|---|
| Hamlin/Regal | 222, 223, 224, 225, 226 |
| Jerrold/G. I. | 201, 202, 203, 204, 205, 206, 207, 208, 218 |
| Oak | 227, 228, 229 |
| Panasonic | 219, 220, 221 |
| Pioneer | 214, 215 |
| Scientific Atlanta | 210, 211 |
| Tocom | 216, 217 |
| Zenith | 212, 213 |

### Manufacturer code numbers (DBS receiver)

| Manufacturer | Code number |
|---|---|
| Sony | 801 (preset code for the supplied remote commander) |

**Notes**
- If more than one code number is listed, try entering them one by one until you come to the correct code for your equipment.
- If you enter a new code number, the code number you previously entered at that setting is erased.
- In some rare cases, your equipment may use a code that is not provided with this remote commander and you may not be able to operate your equipment with the supplied remote commander. In this case, use the equipment's own remote control unit.
- Whenever you remove the batteries — to replace them, for example — if too much time is taken, the code numbers may revert to the factory setting and must be reset.





# Troubleshooting

If the problem persists after trying the methods below, contact your nearest Sony dealer.

**No picture (screen not lit), no sound**
- ➡ Make sure the power cord is connected securely.
- ➡ Operate with the buttons on the TV.
- ➡ Insert the batteries in the remote commander with the correct polarity.
- ➡ Replace the batteries with new ones if they are weak.
- ➡ Check to see if the TV/VIDEO setting is correct: when watching TV, set to TV, and when watching video tapes, set to VIDEO1, 2 or 3.
- ➡ Try another channel. It could be station trouble.
- ➡ Peform AUTO SET UP again using the SET UP button to return to the factory preset condition. (page **15**)

**Poor or no picture (screen lit), good sound**
- ➡ Adjust PICTURE in the VIDEO menu. (page **22**)
- ➡ Adjust BRIGHTNESS in the VIDEO menu. (page **22**)
- ➡ Check antenna/cable connections.
- ➡ Peform AUTO SET UP again using the SET UP button to return to the factory preset condition. (page **15**)
- ➡ Remove objects from the front of TV.
- ➡ Check the LIGHTSENSOR setting in the VIDEO menu. (page **24**)

**Good picture, no sound**
- ➡ Press MUTING so that "MUTING" disappears from the screen. (page **19**)
- ➡ Check the MTS setting in the AUDIO menu (page **26**)
- ➡ Make sure SPEAKER is set to ON in the AUDIO menu. (page **27**)
- ➡ Peform AUTO SET UP again using the SET UP button to return to the factory preset condition (page **15**)

**No color**
- ➡ Adjust the COLOR in the VIDEO menu. (page **22**)
- ➡ Black and white programs cannot be seen in color.
- ➡ Peform AUTO SET UP again using the SET UP button to return to the factory preset condition. (page **15**)

**Only snow and noise appear on the screen**
- ➡ Check the CABLE setting in the SET UP menu. (page **17**)
- ➡ Check the antenna/cable connections.
- ➡ Make sure the channel is broadcasting programs.
- ➡ Press TV (black button) to change the input mode. (page **20**)

**Dotted lines or stripes**
- ➡ Adjust the antenna.
- ➡ Move the TV away from noise sources such as cars, neon signs, and hair-dryers.

**Double images or ghosts**
- ➡ Use a highly directional outdoor antenna or a cable (when the problem is caused by reflections from nearby mountains or tall buildings).

**Cannot operate menu**
- ➡ If the item you want to choose appears in gray, you cannot select it. Press TV/VIDEO correctly.

**Cannot receive upper channels (UHF) when using an antenna**
- ➡ Make sure CABLE is OFF in the SET UP menu. (page **17**)
- ➡ Use AUTO PROGRAM to add receivable channels that are not presently in TV memory. (pages **15, 17**)

**Cannot receive any channels when using cable TV**
- ➡ Make sure CABLE is ON in the SET UP menu. (page **17**)
- ➡ Use AUTO PROGRAM to add receivable channels that are not presently in TV memory. (pages **15, 17**)

**Remote commander does not operate**
- ➡ Batteries could be weak. Replace the batteries.
- ➡ Make sure the TV's power cord is connected securely to the wall outlet.
- ➡ Press TV (FUNCTION) when operating your TV.
- ➡ Are fluorescent lights too close to the TV? Move them at least 3-4 feet away from the TV.
- ➡ Check the S-Link connection. (page **10**)

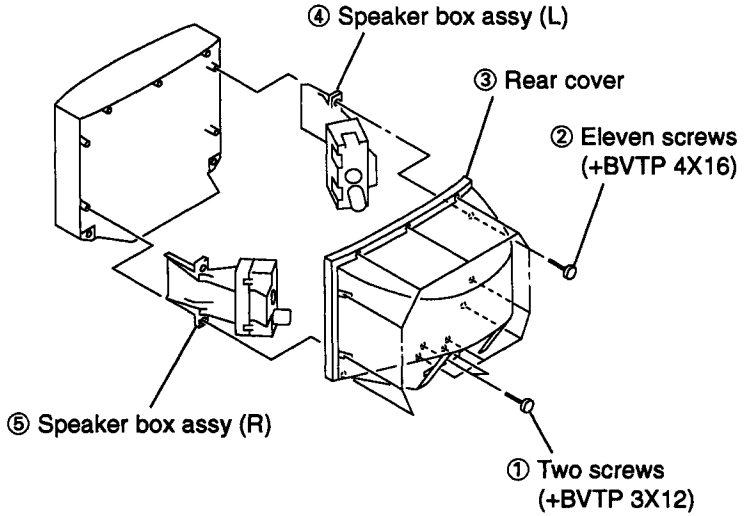
**Cannot gain enough volume when using a cable box**
- ➡ Increase the volume at the cable box. Then press TV (FUNCTION) and adjust the TV's volume.

**TV malfunctions when using the S-Link function**
*(KV-27V25/27V35/29V35C/29V65M/29V75M/32V25/32V35/34V35C/35V35/35V45/35V75 only)*
- ➡ Make sure the TV's power cord is connected securely to the wall outlet.
- ➡ Check the S-Link connection. (page **10**)

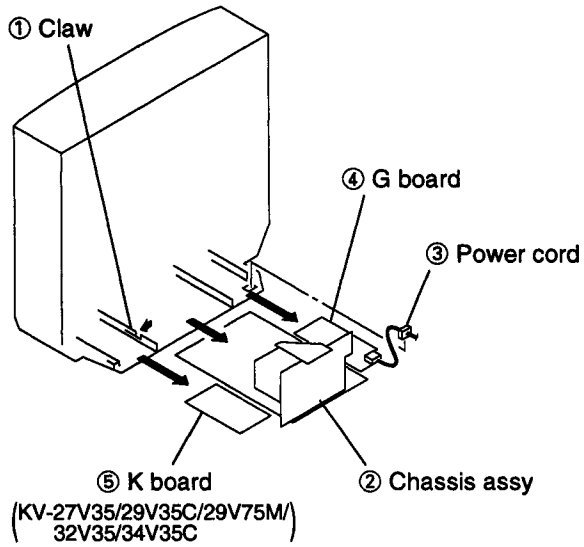
**The TV needs to be cleaned**
- ➡ Clean the TV with a soft dry cloth. Never use strong solvents such as thinner or benzine, which might damage the finish of the cabinet.

# SECTION 2
# DISASSEMBLY

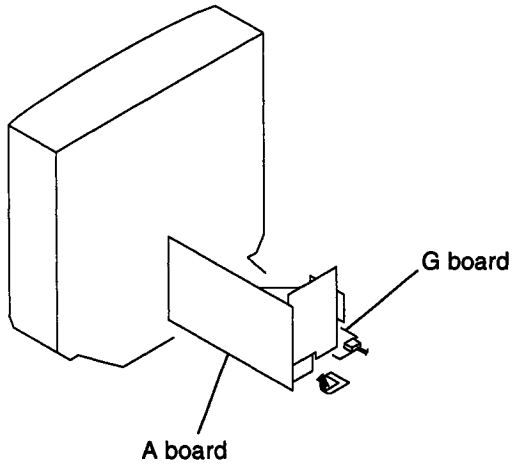
## 2-1. REAR COVER REMOVAL



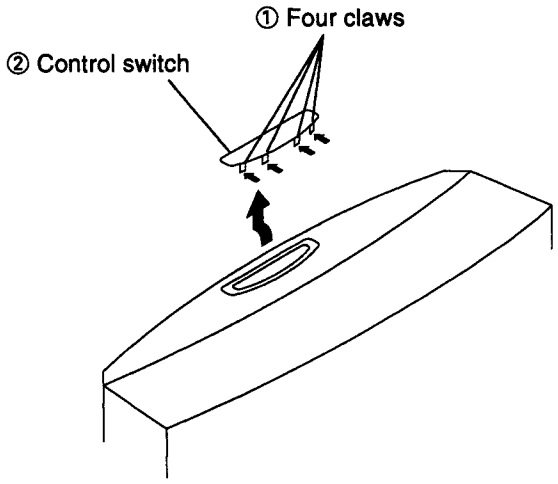

## 2-2. CHASSIS ASSY REMOVAL




## 2-3. SERVICE POSITION



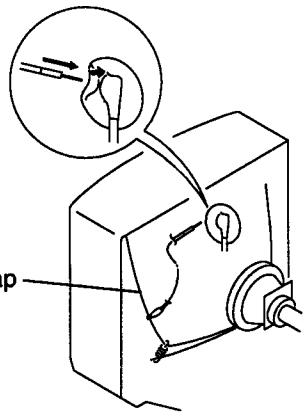

## 2-4. CONTROL SWITCH REMOVAL (KV-27V35/29V35C/29V75M/32V35/34V35C)

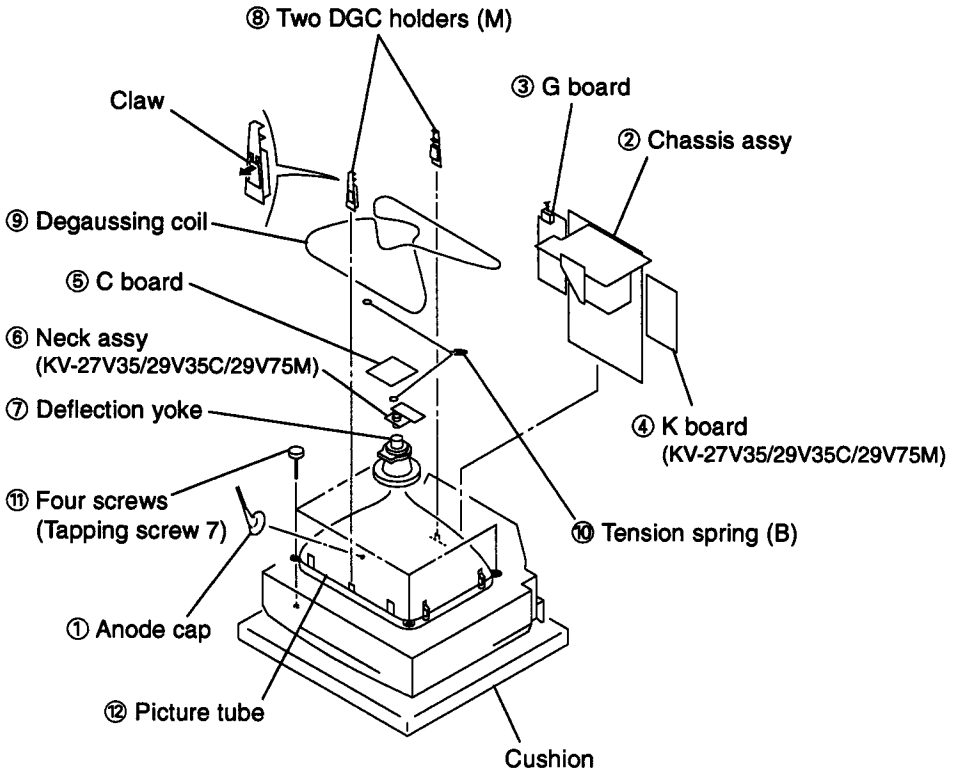


## 2-5. PICTURE TUBE REMOVAL (KV-27V20/27V25/27V35/29V20M/29V35C/29V65M/29V75M)

**WARNING : Before removing anode cap**
H.V. remains in the CRT even after the power is disconnected.

To avoid electrical shock before attempting to remove the anode cap, discharge CRT: Short between anode and CRT coated earth ground strap.

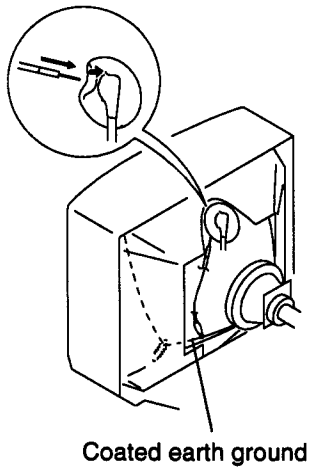


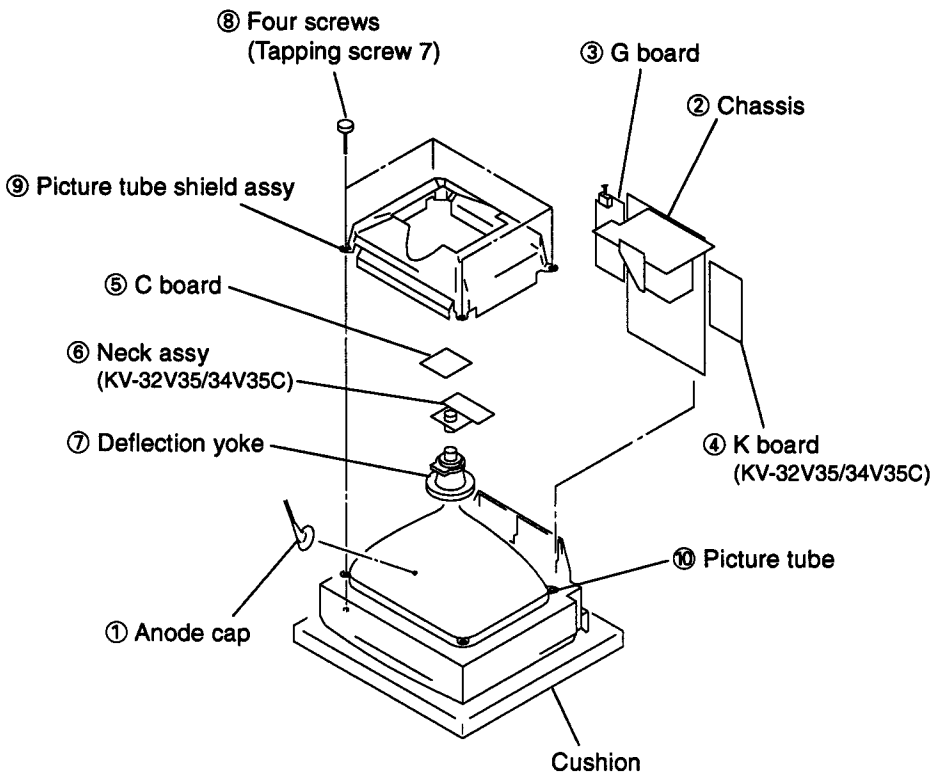




## 2-6. PICTURE TUBE REMOVAL (KV-32V25/32V35/34V35C)

**WARNING : Before removing anode cap**
H.V. remains in the CRT even after the power is disconnected.

To avoid electrical shock before attempting to remove the anode cap, discharge CRT: Short between anode and CRT coated earth ground strap.

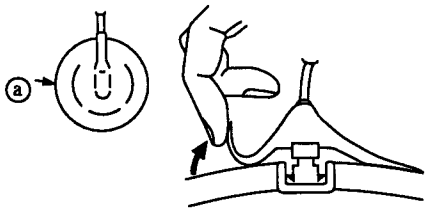


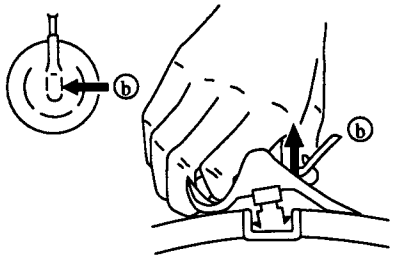
## • REMOVAL OF ANODE-CAP

NOTE : Short circuit the anode of the picture tube and the anode cap to the metal chassis, CRT shield or carbon paint on the CRT, after removing the anode.

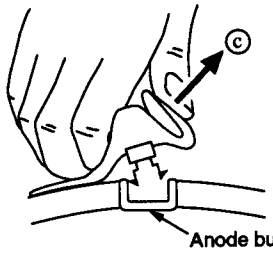
### • REMOVING PROCEDURES




① Turn up one side of the rubber cap in the direction indicated by the arrow ⓐ.




② Using a thumb pull up the rubber cap firmly in the direction indicated by the arrow ⓑ.



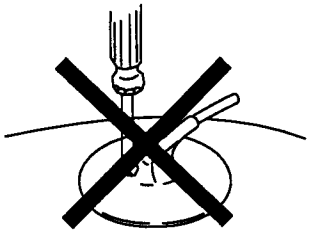

③ When one side of the rubber cap is separated from the anode button, the anode-cap can be removed by turning up the rubber cap and pulling up it in the direction of the arrow ⓒ.

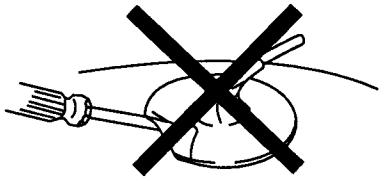
### • HOW TO HANDLE AN ANODE-CAP

① Don't hurt the surface of anode-caps with sharp shaped material!

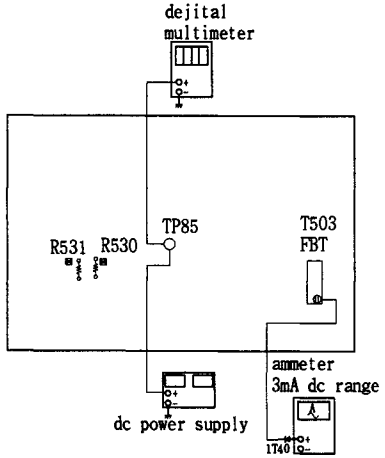
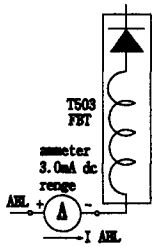
② Don't press the rubber hardly not to hurt inside of anode-caps! A material fitting called as shatter-hook terminal is built in the rubber.

③ Don't turn the foot of rubber over hardly! The shatter-hook terminal will stick out or hurt the rubber.





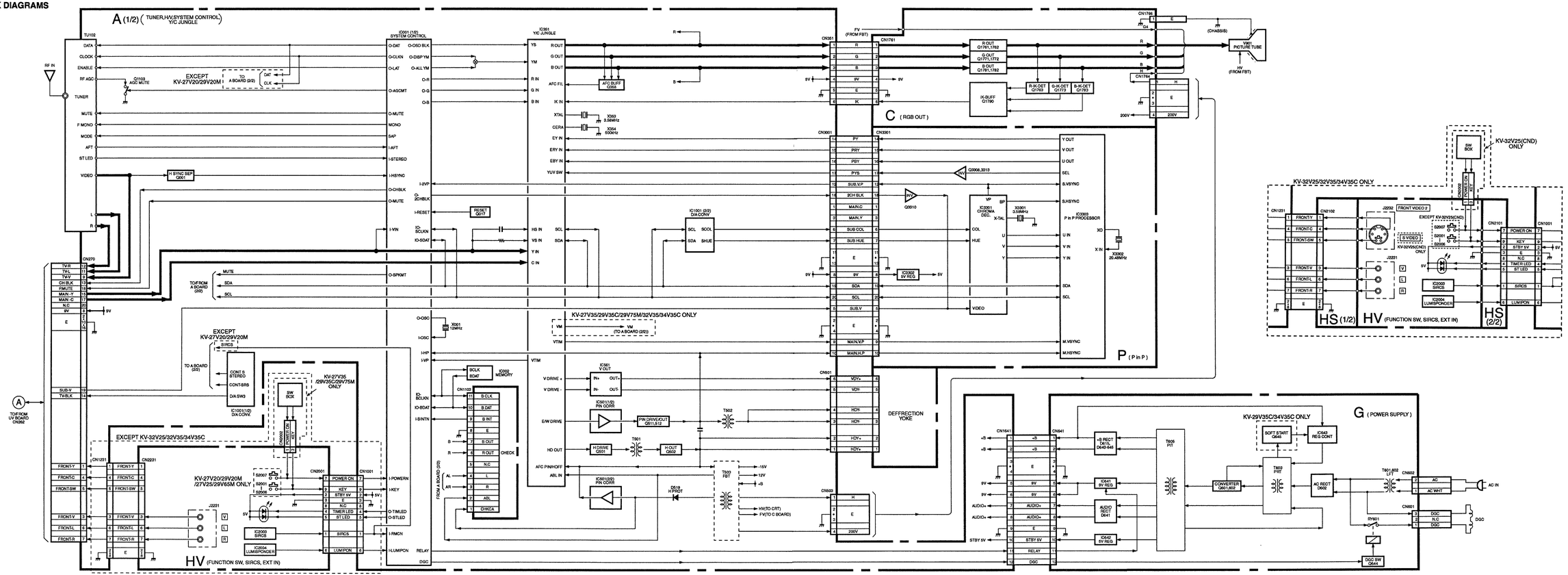
# SECTION 3
# SAFETY RELATED ADJUSTMENTS

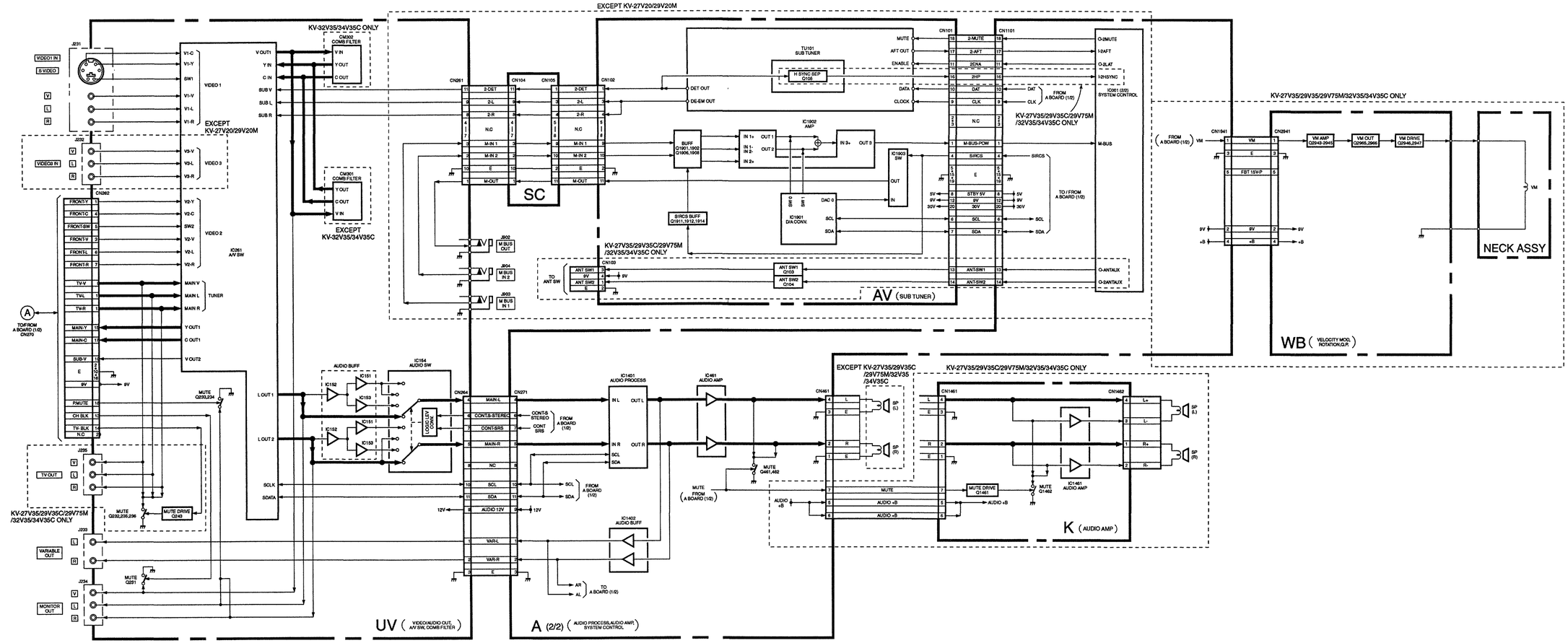
| ADJUSTMENT ITEM AND PROCEDURE | EQUIPMENT AND SIGNAL | MEASUREMENT POSITION | ADJUSTMENT LOCATION | ILLUSTRATION AND SHAPE AND NUMBER |
|---|---|---|---|---|
| **☒ *RESISTOR CONFIRMATION METHOD ( HOLD-DOWN CONFIRMATION) AND READJUSTMENTS**<br>The following adjustments should always be performed when replacing the following components (*marked with ◪ on the schematic diagram).<br>(Hold-down operation confirmation) | | *◪ marked parts<br>IC643,IC351,IC501<br>D519,D520,D521,<br>C531,C532,<br>R387,R529,R530,R531<br>R532,R533,R550,R661<br>T503 | *☒ R530,531 | A BOARD - CONDUCTOR SIDE -<br>  |
| Step 1<br>1. Preparation before confirmation<br>1) Turn the POWER switch ON, and receive *signal and set the *PICTURE and BRIGHTNESS controls to adjustment.<br>2) Confirm that the voltage of the check terminal of *TP is more than *voltage when the set is operating normaly with *Power supply. | * White Picture<br>*Digital multimeter | *TP85 (H. PROT) | *PICTURE<br>BRIGHTNESS<br>.....maximum | [Check Condition]Step 1<br>*more than 18.0VDC (32/34 inch only)<br>*more than 21.0VDC (27/29 inch only)<br>*130 $^{+2.0}_{0}$ VAC (Power Supply) (except 29V35C/34V35C)<br>*220 $^{+2.0}_{0}$ VAC (Power Supply) (29V35C/34V35C only) |
| Step 2<br>2.Confirm that a I ABL. | * White Picture | | | [Check Condition]Step 2<br>*1760 ±100 µA (27/29 inch only)<br>*2160 ±100 µA (32/34 inch only)<br>*130 $^{+2.0}_{0}$ VAC (Power Supply) (except 29V35C/34V35C)<br>*220 $^{+2.0}_{0}$ VAC (Power Supply) (29V35C/34V35C only) |
| Step 3<br>4.Using an external DC power supply, apply voltage between TP 85 and groud.<br>Increase gradually the voltage and confirm that the hold-down works (Raster disappears) at lower than the voltag obtained Step 2 mentioned above *voltage. | * White Picture | |  | [Check Condition]Step 3<br>*lower than 22.05 VDC (32/34 inch only)<br>*lower than 26.05 VDC (27/29 inch only)<br>*130 $^{+2.0}_{0}$ VAC (Power Supply) (except 29V35C/34V35C)<br>*220 $^{+2.0}_{0}$ VAC (Power Supply) (29V35C/34V35C only) |
| Step 4<br>5.Confirm that a voltage of more than *voltage appears TP85 and ground. | | | *PICTURE<br>BRIGHTNESS<br>.....maximum | [Check Condition]Step 4Step 4<br>*more than 18.0VDC (32/34 inch only)<br>*more than 21.0VDC (27/29 inch only)<br>*130 $^{+2.0}_{0}$ VAC (Power Supply) (except 29V35C/34V35C)<br>*220 $^{+2.0}_{0}$ VAC (Power Supply) (29V35C/34V35C only) |

| ADJUSTMENT ITEM AND PROCEDURE | EQUIPMENT AND SIGNAL | MEASUREMENT POSITION | ADJUSTMENT LOCATION | ILLUSTRATION AND SHAPE AND NUMBER |
|---|---|---|---|---|
| **B+ VOLTAGE CONFIRMATION**<br>The following adjustments should always be performed when replacing the following *components. | | *IC643, R661 | | |
| 1) Supply *Voltage AC to with *variable auto-transformer.<br>2) Input an entirely *signal.<br>3) Set the PICTURE control and the BRIGHTNESS control to adjustment. | *Variable auto-transformer<br>*Monoscope | | *PICTURE, BRIGHTNESS ..... initial reset | *130 $^{+2.0}_{-0}$ VAC (except 29V35C/34V35C)<br>*220 $^{+2.0}_{-0}$ VAC (29V35C/34V35C only) |
| 4) Confirm the voltage of *TP is less than *Voltage DC.<br>5) If step 4) is not satisfied, replace the *components repeat above steps. | | *G Board CN641 Pin 1 - ground | *R661 | *Less than 136.5 VDC |

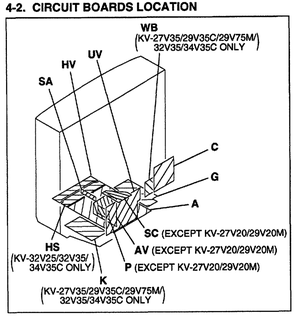
## SECTION 4
## DIAGRAMS

### 4-1. BLOCK DIAGRAMS




EXCEPT KV-27V20/29V20M
KV-32V35/34V35C ONLY
KV-27V35/29V35C/29V75M/32V35/34V35C ONLY
EXCEPT KV-27V20/29V20M
EXCEPT KV-32V35/34V35C
KV-27V35/29V35C/29V75M/32V35/34V35C ONLY
EXCEPT KV-27V35/29V35C/29V75M/32V35/34V35C
KV-27V35/29V35C/29V75M/32V35/34V35C ONLY
VIDEO1 IN
S VIDEO
VIDEO3 IN
TV OUT
VARIABLE OUT
MONITOR OUT
TO/FROM A BOARD (1/2) CN270
TO ANT SW
FROM A BOARD (1/2)
TO / FROM A BOARD (1/2)
TO A BOARD (1/2)
SC
AV (SUB TUNER)
UV ( VIDEO/AUDIO OUT, A/V SW, COMB FILTER )
A (2/2) ( AUDIO PROCESS,AUDIO AMP, SYSTEM CONTROL )
K (AUDIO AMP)
WB ( VELOCITY MOD, ROTATION,Q,R )
NECK ASSY

## 4-2. CIRCUIT BOARDS LOCATION




## 4-3. PRINTED WIRING BOARDS AND SCHEMATIC DIAGRAMS

Note:

- All capacitors are in µF unless otherwise noted. pF: µµF 50WV or less are not indicated except for electrolytics and tantalums.
- All electrolytics are in 50V unless otherwise specified.
- All resistors are in ohms.
  kΩ = 1000Ω, MΩ = 1000kΩ
- Indication of resistance, which does not have one for rating electrical power, is as follows.

| Pitch: 5 mm |
|---|
| Rating electrical power: 1/4W |

- 1/4W in resistance, 1/10W and 1/8W in chip resistance.
- : nonflammable resistor.
- : fusible resistor.
- : internal component.
- : panel designation and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- The components identified by ⚠ in this basic schematic diagram have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation.
  Should replacement be required, replace only with the value originally used.
- When replacing components identified by ◪, make the necessary adjustments indicated. If results do not meet the specified value, change the component identified by ⚠ and repeat the adjustment until the specified value is achieved.
  (Refer to R530 and R531 adjustment on Page 25, 26.)
- When replacing the part in below table, be sure to perform the related adjustment.

| Part replaced (◪) | Adjustment (⚠) |
|---|---|
| IC351, IC501, D519, D520, D521, C531, C532, R387, R529, R530, R531, R532, R533, R550, T503 ..... A BOARD<br>IC643, R661 ..... G BOARD | R530, R531 |

- As to the voltage value shown by the semiconductors on the Schematic Diagram, see the another list.
- Readings are taken with a color-bar signal input.
- Readings are taken with a 10MΩ digital multimeter.
- Voltages are dc with respect to ground unless otherwise noted.
- Voltage variations may be noted due to normal production tolerances.
- All voltages are in V.
  **S : Measurement impossibility.**
- : B-> line.
- : B <- line.
  (Actual measured value may be different).
- : signal path. (SP)
- Circled numbers are waveform reference.

Reference information

| | | |
|---|---|---|
| RESISTOR | : RN | METAL FILM |
| | : RC | SOLID |
| | : FRD | NONFRAMMABLE CARBON |
| | : FUSE | NONFRAMMABLE FUSIBLE |
| | : RW | NONFRAMMABLE WIREWOUND |
| | : RS | NONFRAMMABLE METAL OXIDE |
| | : RB | NONFRAMMABLE CEMENT |
| | : ※ | ADJUSTMENT RESISTOR |
| COIL | : LF-8L | MICRO INDUCTOR |
| CAPACITOR | : TA | TANTALUM |
| | : PS | STYROL |
| | : PP | POLYPROPYLENE |
| | : PT | MYLAR |
| | : MPS | METALIZED POLYESTER |
| | : MPP | METALIZED POLYPROPYLENE |
| | : ALB | BIPOLAR |
| | : ALT | HIGH TEMPERATURE |
| | : ALR | HIGH RIPPLE |

**Note: The symbol ⚠ display is on the component side.**

**The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.**

**The symbol ⚠ indicate fast operating fuse. Replace only with fuse of same rating as marked.**

**Note: Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.**

**Le symbole ⚠ indique une fusible a action rapide. Doit etre remplacee par une fusible de meme valeur, comme maque.**



## P BOARD IC VOLTAGE LIST

| | pin | volt | | pin | volt |
|---|---|---|---|---|---|
| IC3301 | 1 | GND | | 4 | 2.3 |
| | 2 | NC | | 5 | 5.1 |
| | 3 | GND | | 6 | GND |
| | 4 | 4.0 | | 7 | 0.5 |
| | 5 | 6.8 | | 8 | 0 |
| | 6 | GND | | 9 | 0.6 |
| | 7 | 0.2 | | 10 | 5.2 |
| | 8 | 0 | | 11 | 2.1 |
| | 9 | 1.8 | | 12 | 0.3 |
| | 10 | 0.3 | | 13 | NC |
| | 11 | 8.2 | | 14 | -3.0 |
| | 12 | 8.2 | | 15 | GND |
| | 13 | 3.9 | | 16 | GND |
| | 14 | 3.4 | | 17 | 0.7 |
| | 15 | 0 | | 18 | 0.5 |
| | 16 | 2.8 | | 19 | 0.2 |
| | 17 | NC | | 20 | 0.3 |
| | 18 | 2.5 | | 21 | 5.1 |
| | 19 | 3.5 | | 22 | 5.2 |
| | 20 | 3.0 | | 23 | NC |
| | 21 | 3.0 | | 24 | NC |
| | 22 | 4.7 | | 25 | GND |
| | 23 | GND | | 26 | NC |
| | 24 | 2.9 | | 27 | GND |
| IC3302 | IN | 9.1 | | 28 | 2.3 |
| | OUT | 5.3 | | 29 | 5.2 |
| IC3303 | 1 | GND | | 30 | 2.6 |
| | 2 | 3.2 | | 31 | 4.2 |
| | 3 | 2.6 | | 32 | 2.5 |

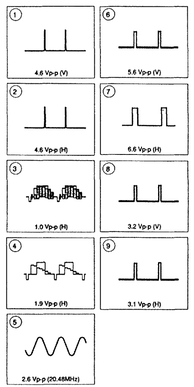
All voltages are in V

## P BOARD TRANSISTOR VOLTAGE LIST

| | B | C | E |
|---|---|---|---|
| Q3301 | 5.3 | 9.1 | 4.7 |
| Q3305 | 0.5 | GND | 1.2 |
| Q3306 | 0.8 | GND | 1.4 |
| Q3307 | 0.6 | GND | 1.3 |
| Q3308 | 0 | GND | 2.8 |
| Q3310 | 0 | 5.2 | GND |
| Q3312 | 0 | 0 | 0.8 |
| Q3313 | 0.8 | 0.4 | GND |

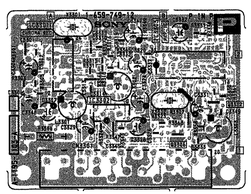
All voltages are in V

## • P BOARD WAVEFORMS

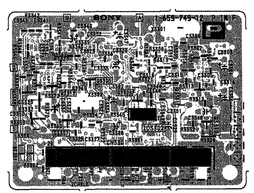



**P** [P IN P] (EXCEPT KV-27V20/29V20M)

**– P BOARD –** <Component Side>

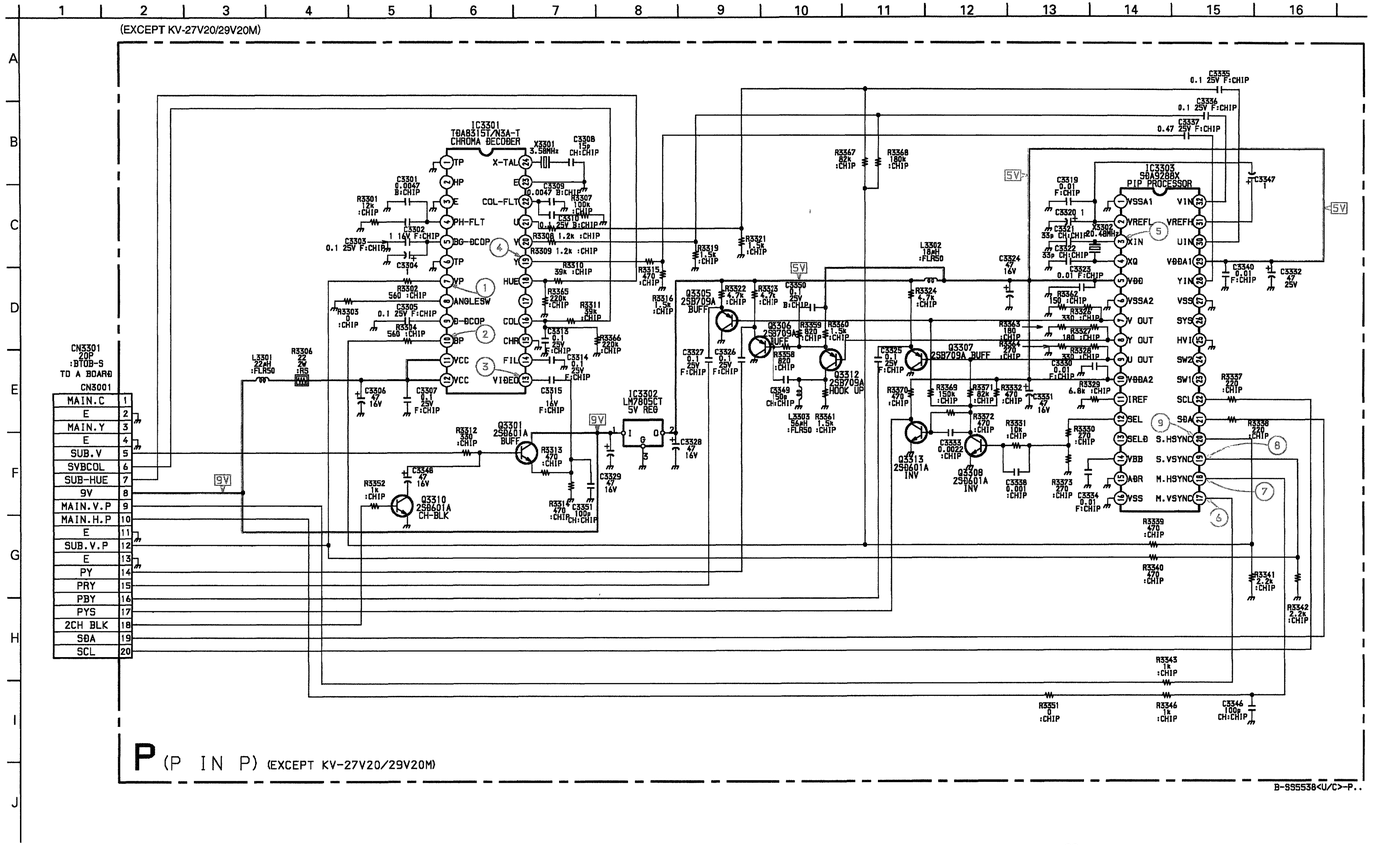


<Conductor Side>



- : Pattern from the side which enables seeing.
- : Pattern of the rear side.



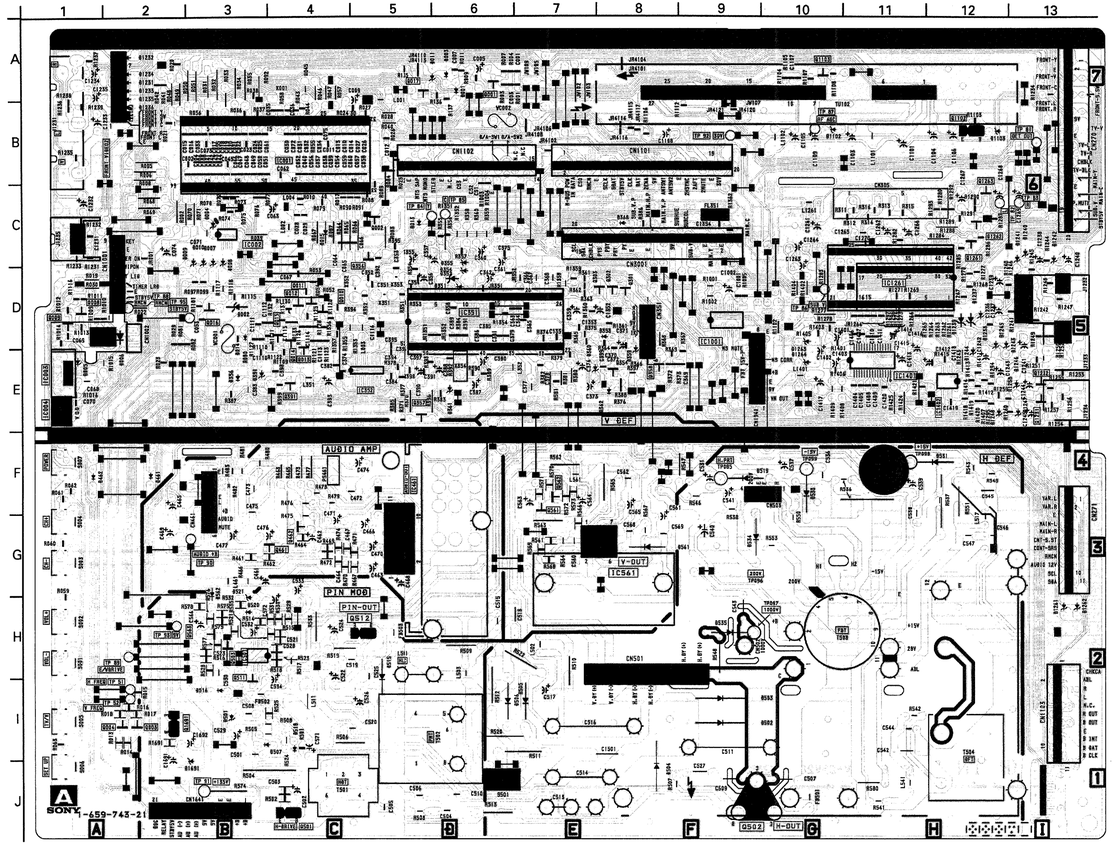


**A** [MICON, Y/C/J, TUNER, PIP, VOL-CTL
AUDIO-AMP, PIN-MOD, V.DEF, H.DEF, AV-SW]

– A BOARD –

**A BOARD**

| IC | | Q1102 | B-12 |
|---|---|---|---|
| IC001 | B-4 | Q1103 | A-10 |
| IC002 | C-3 | Q1231 | E-13 |
| IC351 | D-6 | Q1232 | E-13 |
| IC461 | G-5 | **DIODE** | |
| IC501 | H-3 | D001 | A-6 |
| IC561 | G-8 | D002 | D-3 |
| IC1001 | D-9 | D003 | A-6 |
| IC1401 | E-11 | D004 | C-3 |
| IC1402 | E-12 | D011 | A-6 |
| **TRANSISTOR** | | D013 | C-5 |
| Q001 | A-6 | D014 | D-3 |
| Q002 | C-5 | D015 | C-4 |
| Q003 | I-2 | D353 | D-8 |
| Q004 | I-2 | D356 | E-3 |
| Q010 | D-4 | D360 | E-7 |
| Q011 | D-4 | D362 | E-8 |
| Q012 | D-4 | D368 | C-8 |
| Q013 | E-4 | D462 | F-1 |
| Q014 | D-4 | D501 | I-3 |
| Q015 | D-4 | D502 | I-9 |
| Q016 | D-3 | D503 | I-9 |
| Q017 | A-5 | D504 | J-8 |
| Q301 | D-8 | D505 | E-7 |
| Q302 | D-8 | D506 | I-6 |
| Q303 | D-8 | D507 | I-4 |
| Q354 | E-8 | D515 | H-5 |
| Q356 | C-5 | D516 | I-3 |
| Q357 | E-5 | D518 | I-4 |
| Q358 | E-8 | D519 | F-9 |
| Q461 | G-4 | D520 | H-3 |
| Q462 | G-4 | D521 | H-3 |
| Q501 | J-4 | D530 | F-10 |
| Q502 | J-9 | D531 | F-12 |
| Q503 | H-3 | D534 | G-9 |
| Q511 | I-3 | D561 | D-8 |
| Q512 | H-5 | D562 | G-3 |
| Q561 | F-7 | D1102 | B-10 |
| Q562 | F-7 | D1103 | B-12 |
| Q563 | H-3 | D1248 | E-12 |
| | | D1263 | D-10 |
| | | D1264 | E-10 |

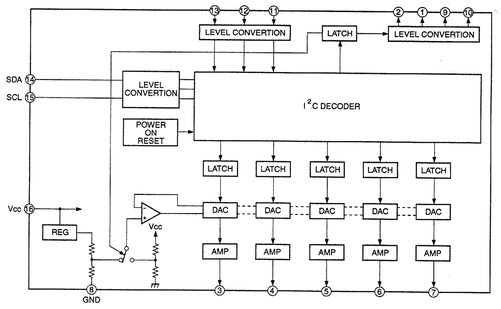



Schematic diagram
← P board

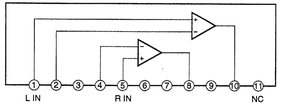
– 39 –

– 40 –

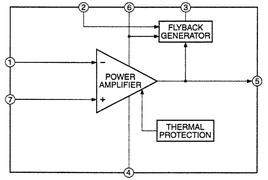
**A BOARD IC1001 CXA1315M**



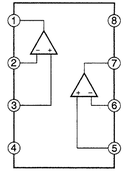

**A BOARD IC461 TDA2009A**




**A BOARD IC561 TDA8172**




**A BOARD IC1402 NJM4558M**



**NOTE:**
The circuit indicated as left contains high voltage of over 600 Vp-p. Care must be paid to prevent an electric shock in inspection or repairing.

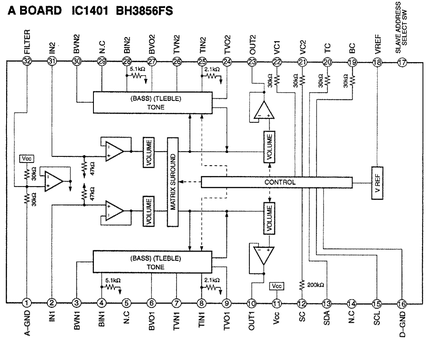
– 41 –

**A BOARD ＊ MARK LIST**

| | KV-27V20/29V20M | KV-27V25/29V85M | KV-27V35/29V35C/29V75M | KV-32V25 | KV-32V35/34V35C |
|---|---|---|---|---|---|
| C360 | # | 0.47 | 0.47 | 0.47 | 0.47 |
| C361 | # | 0.47 | 0.47 | 0.47 | 0.47 |
| C362 | # | 0.47 | 0.47 | 0.47 | 0.47 |
| C375 | 0.1 F/CHIP | # | # | # | # |
| C460 | 22 /25V | 22 /25V | 4.7 | 10 | # |
| C476 | 1000 /25V | 1000 /25V | J/W (5) | 1000 /25V | J/W (5) |
| C477 | 1000 /25V | 1000 /25V | J/W (5) | 1000 /25V | J/W (5) |
| C520 | 0.0022 /500V | 0.0022 /500V | 0.0022 /500V | 0.001 /500V | 0.001 /500V |
| C1501 | # | # | # | 0.12 /200V PP | 0.12 /200V PP |
| CN461 | 4P WHT /S-MICRO | 4P WHT /S-MICRO | 7P WHT /S-MICRO | 4P WHT /S-MICRO | 7P WHT /S-MICRO |
| CN1101 | # | # | 20P /BTOB-P | 20P /BTOB-P | 20P /BTOB-P |
| CN1841 | # | # | 5P WHT /S-MICRO | # | 5P WHT /S-MICRO |
| JR351 | 0 /CHIP | # | # | # | # |
| JR352 | 0 /CHIP | # | # | # | # |
| L461 | 10µH /FLR50 | 10µH /FLR50 | 18uH /FLR50 | 15uH /FLR50 | # |
| Q357 | # | # | 2SD601A | # | 2SD601A |
| R006 | # | 220 | 220 | 220 | 220 |
| R008 | # | 220 | 220 | 220 | 220 |
| R022 | J/W (7.5) | 10k | 10k | 10k | 10k |
| R027 | # | 1k /CHIP | 1k /CHIP | 1k /CHIP | 1k /CHIP |
| R031 | # | 220 | 220 | 220 | 220 |
| R040 | # | 220 | 220 | 220 | 220 |
| R041 | # | 4.7K /CHIP | 4.7K /CHIP | 4.7K /CHIP | 4.7K /CHIP |
| R042 | # | 4.7K /CHIP | 4.7K /CHIP | 4.7K /CHIP | 4.7K /CHIP |
| R045 | # | 220 | 220 | 220 | 220 |
| R050 | # | 220 | 220 | 220 | 220 |
| R080 | # | 220 /CHIP | 220 /CHIP | 220 /CHIP | 220 /CHIP |
| R358 | # | 220 | 220 | 220 | 220 |
| R359 | # | 220 | 220 | 220 | 220 |
| R360 | # | 220 | 220 | 220 | 220 |
| R370 | # | # | 1k | # | 1k |
| R371 | # | # | 1.5k /CHIP | # | 1.5k /CHIP |
| R396 | # | 1k /CHIP | 1k /CHIP | 1k /CHIP | 1k /CHIP |
| R398 | # | # | 1k | # | 1k |
| R466 | 2.2 /FPRD | 2.2 /FPRD | 1.5 /FPRD | 2.2 /FPRD | # |
| R469 | 1.8k /CHIP | 1.8k /CHIP | 5.6k /CHIP | 1.8k /CHIP | 3.3k /CHIP |
| R472 | 1.8k /CHIP | 1.8k /CHIP | 5.6k /CHIP | 1.8k /CHIP | 3.3k /CHIP |
| R482 | 2.2k | 2.2k | # | 2.2k | # |
| R483 | 2.2k | 2.2k | # | 2.2k | # |
| R511 | 56 2W /RS | 56 2W /RS | 56 2W /RS | 68 2W /RS | 68 2W /RS |
| R512 | 82 2W /RS | 82 2W /RS | 82 2W /RS | 100 2W /RS | 100 2W /RS |
| R513 | 0.68 1W /RS | 0.68 1W /RS | 0.68 1W /RS | 0.22 1W /RS | 0.22 1W /RS |
| R530 | 20k /RN-CP | 20k /RN-CP | 20k /RN-CP | 12k /RN-CP | 12k /RN-CP |
| R531 | 24k /RN-CP | 24k /RN-CP | 24k /RN-CP | 68k /RN-CP | 68k /RN-CP |
| R546 | 30k /RN | 30k /RN | 30k /RN | 22k /RN | 22k RN |
| R564 | 8.2 | 8.2 | 8.2 | 10 | 10 |

# Mark : not mounted

**A BOARD IC1401 BH3856FS**




– 42 –

## A BOARD IC VOLTAGE LIST

| | pin | volt | | pin | volt | | pin | volt | | pin | volt |
|---|---|---|---|---|---|---|---|---|---|---|---|
| IC001 | 1 | 0 | | 52 | 0 | | 31 | 3.1 | | 6 | 0.6 |
| | 2 | 0 | | 53 | 4.9 | | 32 | 3.2 | | 7 | 3.8 |
| | 3 | 0 | | 54 | 4.9 | | 33 | 3.7 | | 8 | GND |
| | 4 | 0 | | 55 | 4.9 | | 34 | 4.5 | | 9 | 0 |
| | 5 | 0 | | 56 | 5.0 | | 35 | 4.8 | | 10 | 0 |
| | 6 | 5.0 | | 57 | 5.0 | | 36 | 8.7 | | 11 | GND |
| | 7 | 0 | | 58 | 0 | | 37 | 3.4 | | 12 | GND |
| | 8 | 0 | | 59 | 3.7 | | 38 | 3.6 | | 13 | GND |
| | 9 | 0.8 | | 60 | 0.5 | | 39 | 4.1 | | 14 | 5.0 |
| | 10 | 0 | | 61 | 0 | | 40 | 4.3 | | 15 | 5.0 |
| | 11 | 0 | | 62 | 4.8 | | 41 | 2.5 | | 16 | 8.7 |
| | 12 | 5.0 | | 63 | 0 | | 42 | GND | IC1401 | 1 | GND |
| | 13 | 4.2 | | 64 | 4.6 | | 43 | 2.8 | | 2 | 4.3 |
| | 14 | 1.3 | IC002 | 1 | GND | | 44 | 2.8 | | 3 | 4.3 |
| | 15 | 5.0 | | 2 | GND | | 45 | 4.1 | | 4 | 4.3 |
| | 16 | GND | | 3 | GND | | 46 | 3.3 | | 5 | 0 |
| | 17 | 2.6 | | 4 | GND | | 47 | 6.0 | | 6 | 4.3 |
| | 18 | * | | 5 | 5.0 | | 48 | 0.4 | | 7 | 4.3 |
| | 19 | 3.1 | | 6 | 5.0 | | 49 | 0 | | 8 | 4.4 |
| | 20 | 5.0 | | 7 | GND | | 50 | 0 | | 9 | 4.4 |
| | 21 | 2.0 | | 8 | 5.0 | IC461 | 1 | 1.5 | | 10 | 4.4 |
| | 22 | 2.0 | IC351 | 1 | NC | | 2 | 3.5 | | 11 | 8.7 |
| | 23 | 0 | | 2 | NC | | 3 | 12.2 | | 12 | 3.8 |
| | 24 | 0 | | 3 | 2.2 | | 4 | 3.5 | | 13 | 4.9 |
| | 25 | GND | | 4 | 5.9 | | 5 | 1.5 | | 14 | 0 |
| | 26 | 0 | | 5 | 4.1 | | 6 | 0 | | 15 | 5.0 |
| | 27 | 1.6 | | 6 | 4.6 | | 7 | 0 | | 16 | 0 |
| | 28 | 2.4 | | 7 | 4.3 | | 8 | 0.3 | | 17 | 4.0 |
| | 29 | 5.0 | | 8 | 9.2 | | 9 | 22.1 | | 18 | 4.0 |
| | 30 | 0.2 | | 9 | 5.2 | | 10 | 0.3 | | 19 | 2.0 |
| | 31 | 0 | | 10 | 5.2 | | 11 | 0 | | 20 | 2.0 |
| | 32 | 0 | | 11 | 0.3 | IC501 | 1 | 3.4 | | 21 | 0 |
| | 33 | 0 | | 12 | 6.6 | | 2 | 7.9 | | 22 | 0 |
| | 34 | 0 | | 13 | 6.3 | | 3 | 8.3 | | 23 | 4.3 |
| | 35 | 0 | | 14 | 6.3 | | 4 | -16.5 | | 24 | 4.3 |
| | 36 | 0 | | 15 | GND | | 5 | 2.3 | | 25 | 4.3 |
| | 37 | 0 | | 16 | 0 | | 6 | 2.8 | | 26 | 4.3 |
| | 38 | 0 | | 17 | 0 | | 7 | -16.5 | | 27 | 4.3 |
| | 39 | 0 | | 18 | 5.2 | | 8 | 12.6 | | 28 | 4.3 |
| | 40 | 0 | | 19 | 5.2 | IC581 | 1 | 1.6 | | 29 | 0 |
| | 41 | 0 | | 20 | 5.2 | | 2 | 12.6 | | 30 | 4.3 |
| | 42 | 0 | | 21 | 4.0 | | 3 | -14.5 | | 31 | 4.3 |
| | 43 | 0 | | 22 | 2.2 | | 4 | -16.6 | | 32 | 5.8 |
| | 44 | 3.0 | | 23 | 5.1 | | 5 | 0 | IC1402 | 1 | 4.2 |
| | 45 | 3.0 | | 24 | 1.8 | | 6 | 13.4 | | 2 | 4.3 |
| | 46 | 5.0 | | 25 | 4.5 | | 7 | 1.6 | | 3 | 4.3 |
| | 47 | 5.0 | | 26 | 2.3 | IC1001 | 1 | 0 | | 4 | GND |
| | 48 | GND | | 27 | 4.7 | | 2 | 0 | | 5 | 4.3 |
| | 49 | GND | | 28 | 1.7 | | 3 | 3.3 | | 6 | 4.3 |
| | 50 | 5.0 | | 29 | 6.8 | | 4 | 2.8 | | 7 | 4.3 |
| | 51 | 0 | | 30 | 0.7 | | 5 | 0.5 | | 8 | 8.7 |

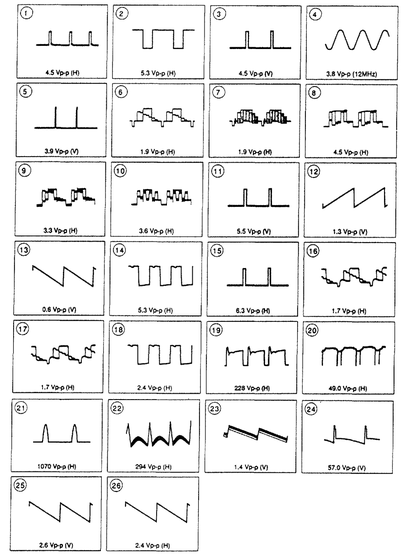
All voltages are in V
*:Can not measured

## A BOARD TRANSISTOR VOLTAGE LIST

| | B | C | E |
|---|---|---|---|
| Q001 | 5.2 | 0.9 | 5.0 |
| Q002 | 4.8 | 5.0 | 4.1 |
| Q003 | -0.4 | 4.2 | GND |
| Q004 | 0.8 | GND | 1.3 |
| Q010 | 0 | 8.7 | 0 |
| Q011 | 0 | 8.7 | 0 |
| Q012 | 0 | 8.7 | 0 |
| Q013 | -0.2 | 0 | GND |
| Q014 | -0.2 | 0 | GND |
| Q015 | -0.2 | 0 | GND |
| Q016 | 5.8 | 8.7 | 5.1 |
| Q017 | 4.4 | 5.0 | 5.0 |
| Q301 | 4.0 | GND | 2.2 |
| Q302 | 4.0 | GND | 1.8 |
| Q303 | 4.0 | GND | 2.0 |
| Q354 | 0.2 | GND | -0.5 |
| Q356 | 4.9 | GND | 5.6 |
| Q357 | 3.6 | 8.7 | 0 |
| Q358 | 1.9 | 8.7 | 2.0 |
| Q461 | 0.8 | 0 | 4.4 |
| Q462 | 20.0 | 20.6 | 20.7 |
| Q501 | -0.7 | 105.6 | GND |
| Q502 | -0.4 | 136.1 | 0 |
| Q503 | 0 | 8.3 | GND |
| Q511 | -16.3 | -13.0 | -16.5 |
| Q512 | -16.9 | 19.1 | -16.0 |
| Q563 | 134.3 | 0.4 | 134.9 |
| Q1102 | 6.0 | 9.2 | 5.3 |
| Q1103 | 0 | 2.5 | GND |
| Q1231 | 0 | 0 | GND |
| Q1232 | 0 | 0 | GND |

All voltages are in V

## • A BOARD WAVEFORMS


1 4.5 Vp-p (H)
2 5.3 Vp-p (H)
3 4.5 Vp-p (V)
4 3.8 Vp-p (12MHz)
5 3.9 Vp-p (V)
6 1.9 Vp-p (H)
7 1.9 Vp-p (H)
8 4.5 Vp-p (H)
9 3.3 Vp-p (H)
10 3.6 Vp-p (H)
11 5.5 Vp-p (V)
12 1.3 Vp-p (V)
13 0.6 Vp-p (V)
14 5.3 Vp-p (H)
15 6.3 Vp-p (H)
16 1.7 Vp-p (H)
17 1.7 Vp-p (H)
18 2.4 Vp-p (H)
19 228 Vp-p (H)
20 49.0 Vp-p (H)
21 1070 Vp-p (H)
22 294 Vp-p (H)
23 1.4 Vp-p (V)
24 57.0 Vp-p (V)
25 2.6 Vp-p (V)
26 2.4 Vp-p (H)

## UV BOARD ＊ MARK LIST

| | KV-27V20/29V20M | KV-27V25/29V35M | KV-32V25 | KV-27V35/29V35C/29V75M | KV-36V35/34V35C |
|---|---|---|---|---|---|
| C539 | # | 0.047 MPS | 0.047 MPS | 0.047 MPS | 0.047 MPS |
| C539 | # | 1 | 1 | 1 | 1 |
| C539 | # | 1 | 1 | 1 | 1 |
| C545 | # | # | # | 470 25V | 470 25V |
| C546 | # | # | # | 0.47 | 0.47 |
| C547 | # | # | # | 0.47 | 0.47 |
| C551 | # | # | # | 0.047 MPS | 0.047 MPS |
| C552 | 100 16V | 100 16V | 470 25V | 470 25V | 470 25V |
| C553 | 47 16V 3P | 47 16V 3P | 47 25V | 47 16V 3P | 47 25V |
| C554 | # | # | 1 | 1 | 1 |
| C555 | # | # | 1 | 1 | 1 |
| C556 | 100 16V | 100 16V | 470 16V | 470 16V | 470 16V |
| C5001 | 1-473-548- 11 | 1-473-548- 11 | 1-467-554- 21 | # | 1-467-456- 11 |
| CN101 | # | # | 11P BTOB-S | 11P BTOB-S | 11P BTOB-S |
| CN201 | # | # | # | 11P BTOB-S | 11P BTOB-S |
| CN202 | # | # | # | MTZJ-177-3.3 | MTZJ-177-3.3 |
| CN203 | # | MTZJ-177-10B | MTZJ-177-10B | MTZJ-177-10B | MTZJ-177-10B |
| CN204 | # | MTZJ-177-10B | MTZJ-177-10B | MTZJ-177-10B | MTZJ-177-10B |
| CN205 | # | MTZJ-177-10B | MTZJ-177-10B | MTZJ-177-10B | MTZJ-177-10B |
| CN206 | # | MTZJ-177-10B | MTZJ-177-10B | MTZJ-177-10B | MTZJ-177-10B |
| CN207 | # | # | # | MTZJ-177-3.3 | MTZJ-177-3.3 |
| CN208 | # | # | # | MTZJ-177-3.3 | MTZJ-177-3.3 |
| CN209 | # | MTZJ-177-4.2 | MTZJ-177-4.2 | MTZJ-177-4.2 | MTZJ-177-4.2 |
| CN210 | # | MTZJ-177-3.3 | MTZJ-177-3.3 | MTZJ-177-3.3 | MTZJ-177-3.3 |
| CN211 | # | MTZJ-177-4.2 | MTZJ-177-4.2 | MTZJ-177-4.2 | MTZJ-177-4.2 |
| CN1101 | MM1311AD | MM1313AD | MM1313AD | MM1313AD | MM1313AD |
| CN1201 | # | 1-790-517- 11 3P | 1-790-517- 11 3P | 1-790-517- 11 3P | 1-790-517- 11 3P |
| CN1202 | # | # | # | 1-790-517- 11 3P | 1-790-517- 11 3P |
| CN1203 | # | SIRCS JACK | SIRCS JACK | SIRCS JACK | SIRCS JACK |
| CN1204 | # | SIRCS JACK | SIRCS JACK | SIRCS JACK | SIRCS JACK |
| CN1205 | # | SIRCS JACK | SIRCS JACK | SIRCS JACK | SIRCS JACK |
| CN1263 | 0 CHIP | # | # | # | # |
| CN1264 | 0 CHIP | # | # | # | # |
| CN1265 | 0 CHIP | # | # | # | # |
| CP1266 | 5MM | 7.5MM | 7.5MM | 4.7 | 4.7 |
| Q101 | # | # | # | 2SD601A | 2SD601A |
| Q102 | # | # | # | 2SD601A | 2SD601A |
| Q103 | # | # | # | 2SD601A | 2SD601A |
| Q104 | # | # | # | 2SB709A | 2SB709A |
| Q105 | # | # | # | 2SB709A | 2SB709A |
| Q106 | # | # | # | 2SB709A | 2SB709A |
| Q107 | # | # | # | 2SD601A | 2SD601A |
| Q201 | # | # | # | 2SD601A | 2SD601A |
| R206 | # | # | # | 1k CHIP | 1k CHIP |
| R207 | # | # | # | 0 CHIP | 0 CHIP |
| R208 | # | # | # | 1k CHIP | 1k CHIP |
| R209 | # | # | # | 6.8k CHIP | 6.8k CHIP |
| R210 | # | # | # | 6.8k CHIP | 6.8k CHIP |
| R211 | # | # | # | 4.7k CHIP | 4.7k CHIP |
| R212 | # | # | # | 4.7k CHIP | 4.7k CHIP |
| R213 | # | # | # | 470 CHIP | 470 CHIP |
| R214 | # | # | # | 100 CHIP | 100 CHIP |
| R215 | # | # | # | 100 CHIP | 100 CHIP |
| R216 | # | # | # | 100 CHIP | 100 CHIP |
| R217 | # | # | # | 75 CHIP | 75 CHIP |
| R218 | # | 75 CHIP | 75 CHIP | 75 CHIP | 75 CHIP |
| R219 | # | 470k CHIP | 470k CHIP | 470k CHIP | 470k CHIP |
| R220 | # | 4.7k CHIP | 4.7k CHIP | 4.7k CHIP | 4.7k CHIP |
| R221 | # | 470k CHIP | 470k CHIP | 470k CHIP | 470k CHIP |
| R222 | # | 4.7k CHIP | 4.7k CHIP | 4.7k CHIP | 4.7k CHIP |
| R223 | # | # | # | 56 CHIP | 56 CHIP |
| R224 | # | # | # | 470k CHIP | 470k CHIP |
| R225 | # | # | # | 470k CHIP | 470k CHIP |
| R226 | # | # | # | 470k CHIP | 470k CHIP |
| R227 | # | # | # | 5.6k CHIP | 5.6k CHIP |
| R228 | # | 22 CHIP | 22 CHIP | 22 CHIP | 22 CHIP |
| R229 | # | # | # | 560 CHIP | 560 CHIP |
| R230 | # | # | # | 680 | 680 CHIP |
| R231 | # | # | # | 4.7k | 4.7k |
| R276 | # | # | # | 4.7k | 4.7k |
| R278 | # | # | # | 470 | 470 |
| R281 | # | 220 CHIP | 220 CHIP | 220 CHIP | 220 CHIP |
| R291 | # | 100 CHIP | 100 CHIP | 100 CHIP | 100 CHIP |
| R292 | 100 CHIP | # | # | 100 CHIP | 100 CHIP |
| R293 | # | 100 CHIP | 100 CHIP | 100 CHIP | 100 CHIP |
| R294 | # | 100 FPRD | 100 FPRD | 100 FPRD | 100 FPRD |
| R295 | # | 0 CHIP | 0 CHIP | 0 CHIP | 0 CHIP |
| R510 | # | 100 FPRD | 100 FPRD | 100 FPRD | 100 FPRD |
| R5501 | # | 100 FPRD | 100 FPRD | 100 FPRD | 100 FPRD |
| R551 | # | 1k CHIP | 1k CHIP | 1k CHIP | 1k CHIP |
| R552 | # | 1k CHIP | 1k CHIP | 1k CHIP | 1k CHIP |
| R553 | # | 1k CHIP | 1k CHIP | 1k CHIP | 1k CHIP |
| R554 | # | 1k CHIP | 1k CHIP | 1k CHIP | 1k CHIP |

# Mark : not mounted

## UV BOARD TRANSISTOR VOLTAGE LIST

| | B | C | E |
|---|---|---|---|
| Q231 | 0 | 5.7 | GND |
| Q232 | 0.2 | 4.9 | GND |
| Q233 | 0 | 0 | GND |
| Q234 | 0 | 0 | GND |
| Q235 | 0 | 0 | GND |
| Q236 | 0 | 0 | GND |
| Q237 | 5.0 | GND | 5.7 |
| Q238 | 4.1 | GND | 4.7 |
| Q239 | 4.1 | GND | 4.7 |
| Q240 | 4.4 | GND | 5.0 |
| Q241 | 4.4 | GND | 5.0 |
| Q242 | 4.3 | GND | 4.9 |
| Q243 | 0.2 | GND | 0.9 |
| Q261 | 4.6 | 8.7 | 4.0 |
| Q262 | 4.9 | 5.7 | 4.2 |
| Q263 | 3.4 | GND | 4.1 |
| Q265 | 4.3 | GND | 4.9 |

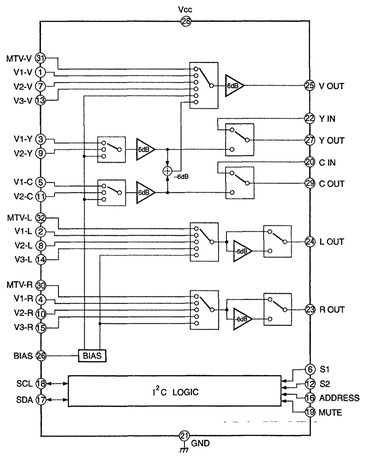
All voltages are in V

## UV BOARD IC VOLTAGE LIST

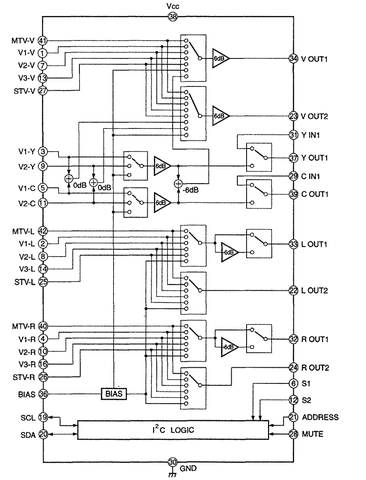
| | pin | volt | | pin | volt |
|---|---|---|---|---|---|
| IC151 | 1 | 4.4 | | 12 | 4.4 |
| | 2 | 4.4 | | 13 | 4.4 |
| | 3 | 4.4 | | 14 | 4.4 |
| | 4 | 8.7 | | 15 | 4.4 |
| | 5 | 4.4 | | 16 | 8.7 |
| | 6 | 4.4 | IC261 | 1 | 4.8 |
| | 7 | 4.4 | | 2 | 4.2 |
| | 8 | 4.4 | | 3 | 4.8 |
| | 9 | 4.4 | | 4 | 4.2 |
| | 10 | 4.4 | | 5 | 4.8 |
| | 11 | GND | | 6 | 4.5 |
| | 12 | 4.4 | | 7 | 4.8 |
| | 13 | 4.4 | | 8 | 4.2 |
| | 14 | 4.4 | | 9 | 4.8 |
| IC152 | 1 | 4.4 | | 10 | 4.2 |
| | 2 | 4.4 | | 11 | 4.9 |
| | 3 | 4.4 | | 12 | 5.8 |
| | 4 | 8.7 | | 13 | 4.8 |
| | 5 | 4.4 | | 14 | 4.2 |
| | 6 | 4.4 | | 15 | 0 |
| | 7 | 4.4 | | 16 | 4.2 |
| | 8 | 4.4 | | 17 | 5.8 |
| | 9 | 4.4 | | 18 | NC |
| | 10 | 4.4 | | 19 | 5.0 |
| | 11 | GND | | 20 | 4.9 |
| | 12 | 4.4 | | 21 | GND |
| | 13 | 4.4 | | 22 | NC |
| | 14 | 4.4 | | 23 | 6.7 |
| IC153 | 1 | 4.4 | | 24 | NC |
| | 2 | 4.4 | | 25 | 4.2 |
| | 3 | 4.4 | | 26 | 4.2 |
| | 4 | GND | | 27 | 6.1 |
| | 5 | 4.4 | | 28 | NC |
| | 6 | 4.4 | | 29 | 4.8 |
| | 7 | 4.4 | | 30 | GND |
| | 8 | 8.7 | | 31 | 8.6 |
| IC154 | 1 | 4.4 | | 32 | 4.1 |
| | 2 | 4.4 | | 33 | 4.1 |
| | 3 | 4.4 | | 34 | 5.0 |
| | 4 | 4.4 | | 35 | NC |
| | 5 | 4.4 | | 36 | 4.2 |
| | 6 | GND | | 37 | 4.3 |
| | 7 | GND | | 38 | 8.7 |
| | 8 | GND | | 39 | 3.4 |
| | 9 | 0.5 | | 40 | 4.2 |
| | 10 | 0.5 | | 41 | 5.2 |
| | 11 | 4.4 | | 42 | 4.2 |

All voltages are in V

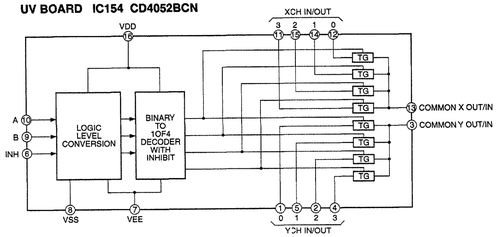
## UV BOARD IC261 MM1311AD (KV-27V20/29V20M ONLY)




## UV BOARD IC261 MM1313AD (EXCEPT KV-27V20/29V20M)




## UV BOARD IC154 CD4052BCN



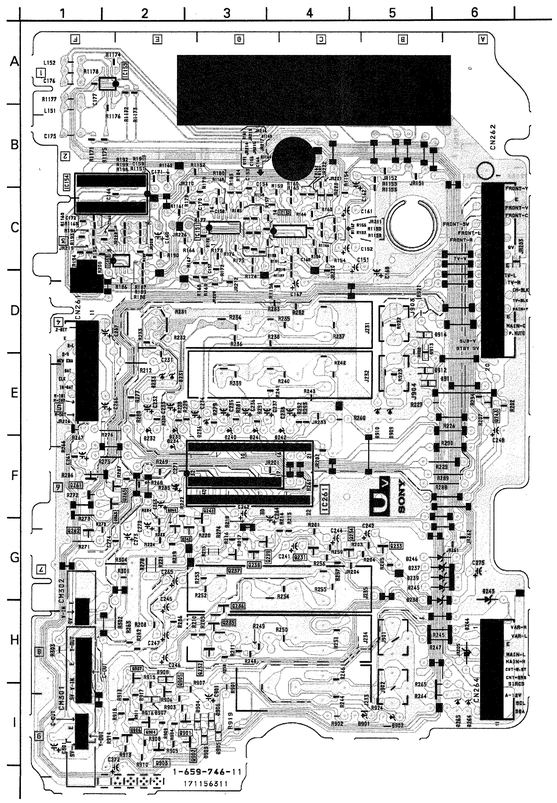

Schematic diagram
◀ A board



Schematic diagram
UV board ▶

**UV** [A/V SW, EXT IN/OUT, AUDIO SW, AUDIO BUFF.]

– UV BOARD –




UV BOARD

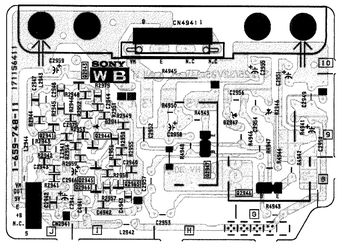
| IC | |
|---|---|
| IC151 | C-3 |
| IC152 | C-4 |
| IC153 | C-2 |
| IC154 | C-2 |
| IC261 | F-4 |
| **TRANSISTOR** | |
| Q231 | G-4 |
| Q232 | H-3 |
| Q233 | G-5 |
| Q234 | G-5 |
| Q235 | H-3 |
| Q236 | H-3 |
| Q237 | G-3 |
| Q238 | G-3 |
| Q239 | G-4 |
| Q240 | G-2 |
| Q241 | G-3 |
| Q242 | G-3 |
| Q243 | E-6 |
| Q261 | F-1 |
| Q262 | G-1 |
| Q263 | F-2 |
| Q265 | F-2 |
| **DIODE** | |
| D231 | E-2 |
| D232 | E-2 |
| D233 | E-2 |
| D234 | F-2 |
| D235 | E-2 |
| D236 | E-3 |
| D237 | G-6 |
| D238 | G-6 |
| D239 | G-6 |
| D240 | E-3 |
| D241 | E-3 |
| D242 | E-4 |
| D243 | G-6 |
| D244 | H-6 |
| D245 | G-6 |
| D246 | G-6 |
| D264 | I-6 |
| D265 | I-6 |
| D902 | I-5 |
| D909 | E-5 |
| D910 | E-5 |



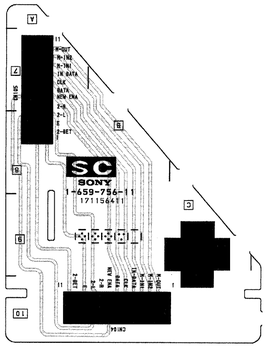
**WB** [VELOCITY MOD.] (KV-27V35/29V35C/29V75M/32V35/34V35C ONLY)

**SC** (EXCEPT KV-27V20/29V20M)

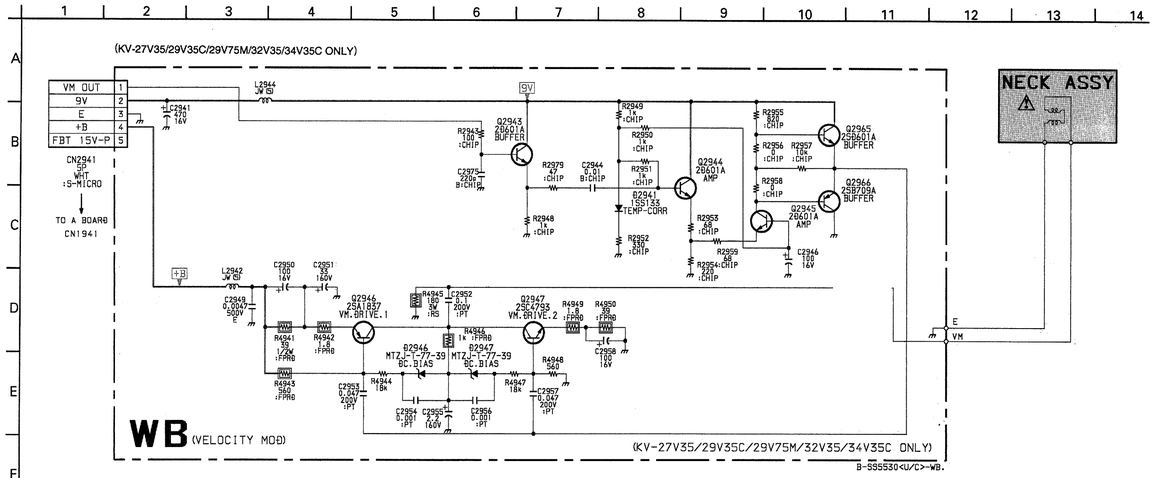
– WB BOARD –

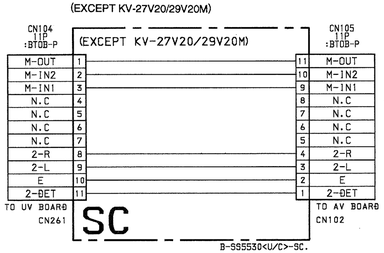



– SC BOARD –





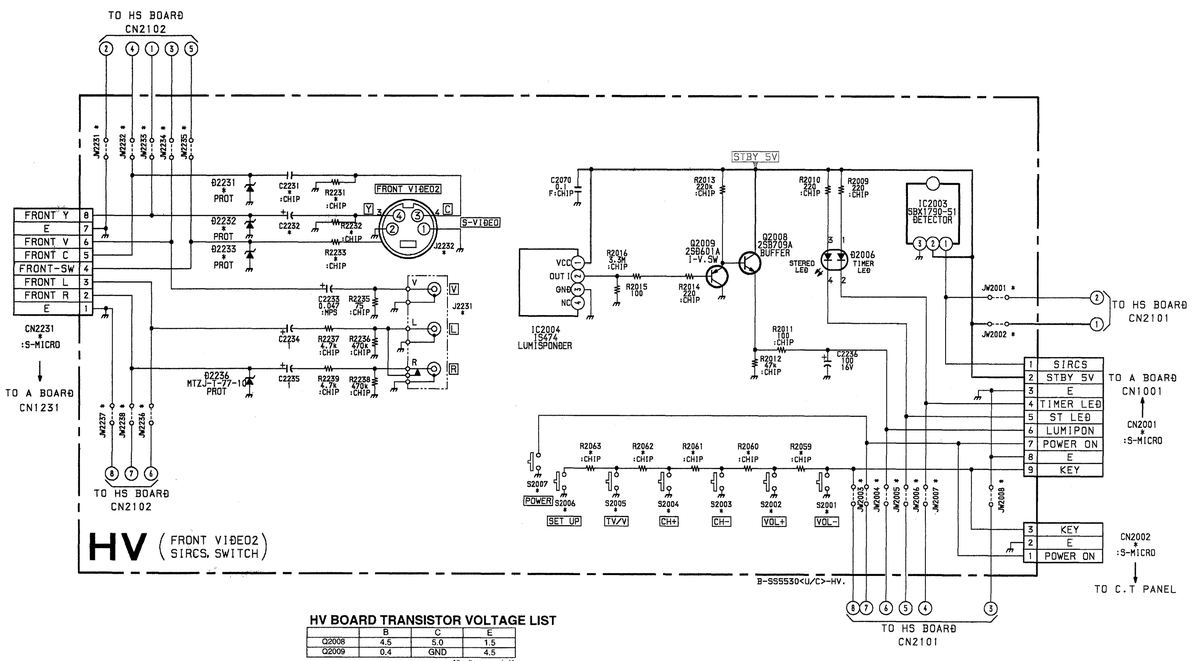



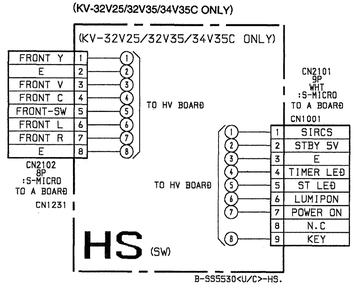




**WB BOARD TRANSISTOR VOLTAGE LIST**

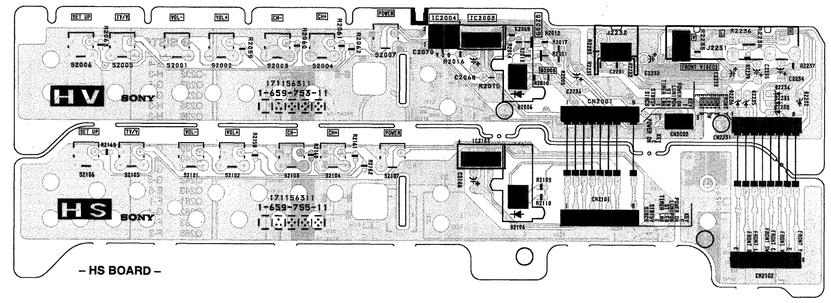
| | B | C | E |
|---|---|---|---|
| Q2943 | 3.1 | 9.0 | 2.4 |
| Q2944 | 2.7 | 9.0 | 2.1 |
| Q2945 | 2.8 | 5.8 | 2.1 |
| Q2946 | 134.0 | 67.4 | 135.0 |
| Q2947 | 1.8 | 67.4 | 0.5 |
| Q2965 | 5.8 | 9.0 | 5.9 |
| Q2966 | 5.8 | GND | 5.9 |

All voltages are in V




– HV BOARD –




– HS BOARD –

## HV BOARD TRANSISTOR VOLTAGE LIST

| | B | C | E |
|---|---|---|---|
| Q2008 | 4.5 | 5.0 | 1.5 |
| Q2009 | 0.4 | GND | 4.5 |

All voltages are in V

## HV BOARD IC VOLTAGE LIST

| | pin | volt |
|---|---|---|
| IC2003 | 1 | 5.0 |
| | 2 | 5.0 |
| | 3 | GND |
| IC2004 | 1 | 5.0 |
| | 2 | 0.5 |
| | 3 | GND |
| | 4 | NC |

All voltages are in V

## HV BOARD * MARK LIST

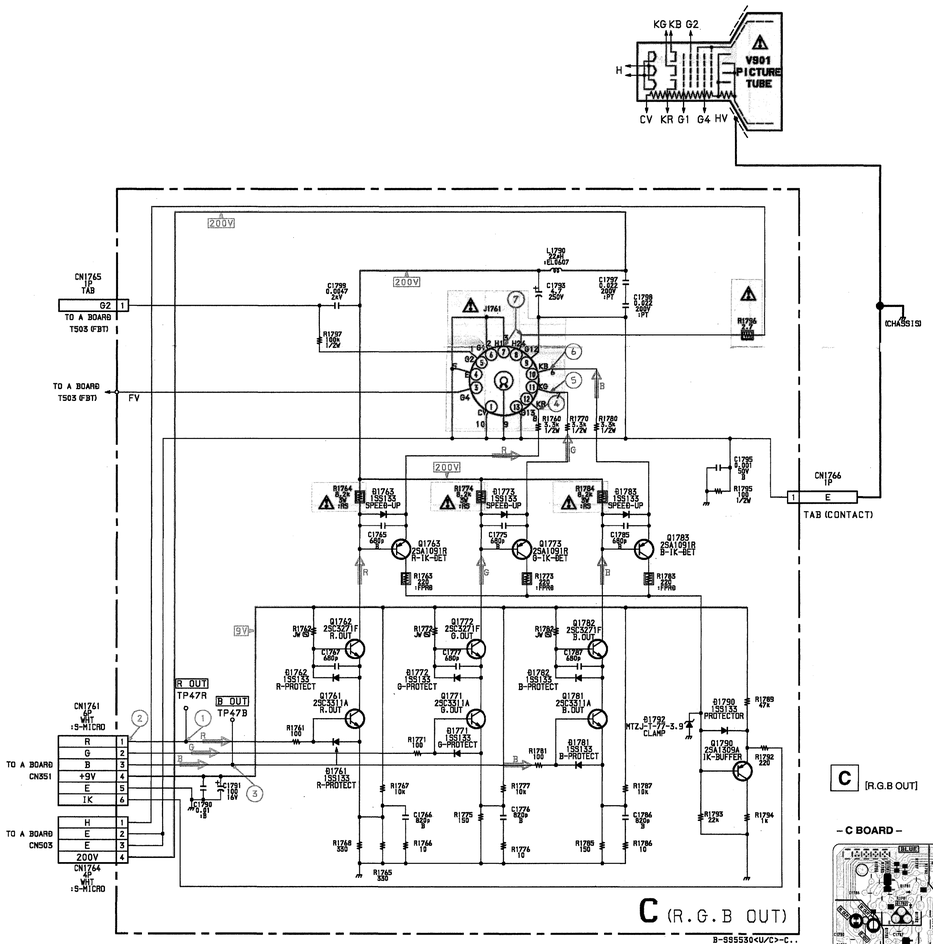
| | KV-27V20/27V25/29V20M/29V65M | KV-27V30/29V35C/29V75M | KV-32V25(US)/32V35/34V35C | KV-32V25 (CND) |
|---|---|---|---|---|
| C2231 | # | # | # | 0.01 F-CHIP |
| C2232 | # | # | # | 0.047 MPS |
| CN2001 | 9P WHT-L :S-MICRO | 9P WHT-L :S-MICRO | # | # |
| CN2002 | # | 3P WHT-L :S-MICRO | # | 3P WHT-L :S-MICRO |
| CN2231 | 8P WHT-L :S-MICRO | 8P WHT-L :S-MICRO | # | # |
| D2231 | # | # | # | MTZJ-T-77-10 |
| D2232 | # | # | # | MTZJ-T-77-10 |
| D2233 | # | # | # | MTZJ-T-77-10 |
| J2232 | # | # | # | S-JACK |
| JW2001 | # | # | 20MM | 20MM |
| JW2002 | # | # | 20MM | 20MM |
| JW2003 | # | # | 20MM | 20MM |
| JW2004 | # | # | 20MM | 20MM |
| JW2005 | # | # | 20MM | 20MM |
| JW2006 | # | # | 20MM | 20MM |
| JW2007 | # | # | 20MM | 20MM |
| JW2008 | # | # | 20MM | 20MM |
| JW2231 | # | # | 20MM | 20MM |
| JW2232 | # | # | 20MM | 20MM |
| JW2233 | # | # | 20MM | 20MM |
| JW2234 | # | # | 20MM | 20MM |
| JW2235 | # | # | 20MM | 20MM |
| JW2236 | # | # | 20MM | 20MM |
| JW2237 | # | # | 20MM | 20MM |
| JW2238 | # | # | 20MM | 20MM |
| R2059 | 820 :CHIP | # | 820 :CHIP | # |
| R2060 | 1k :CHIP | # | 1k :CHIP | # |
| R2061 | 1.8k :CHIP | # | 1.8k :CHIP | # |
| R2062 | 4.7k :CHIP | # | 4.7k :CHIP | # |
| R2063 | 10k :CHIP | # | 10k :CHIP | # |
| R2231 | # | # | # | 75 :CHIP |
| R2232 | # | # | # | 75 :CHIP |
| R2233 | # | # | # | 4.7k :CHIP |
| S2001 | TACTILE-SW | # | TACTILE-SW | # |
| S2002 | TACTILE-SW | # | TACTILE-SW | # |
| S2003 | TACTILE-SW | # | TACTILE-SW | # |
| S2004 | TACTILE-SW | # | TACTILE-SW | # |
| S2005 | TACTILE-SW | # | TACTILE-SW | # |
| S2006 | TACTILE-SW | # | TACTILE-SW | # |
| S2007 | TACTILE-SW | # | TACTILE-SW | # |

# Mark : not mounted

Schematic diagrams ← SC, WB boards

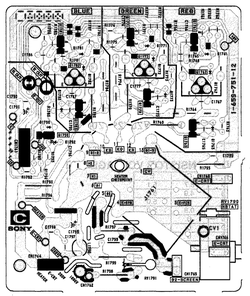


Schematic diagrams HS, HV boards →




C [R.G.B OUT]

– C BOARD –

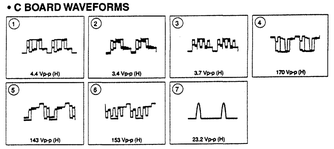


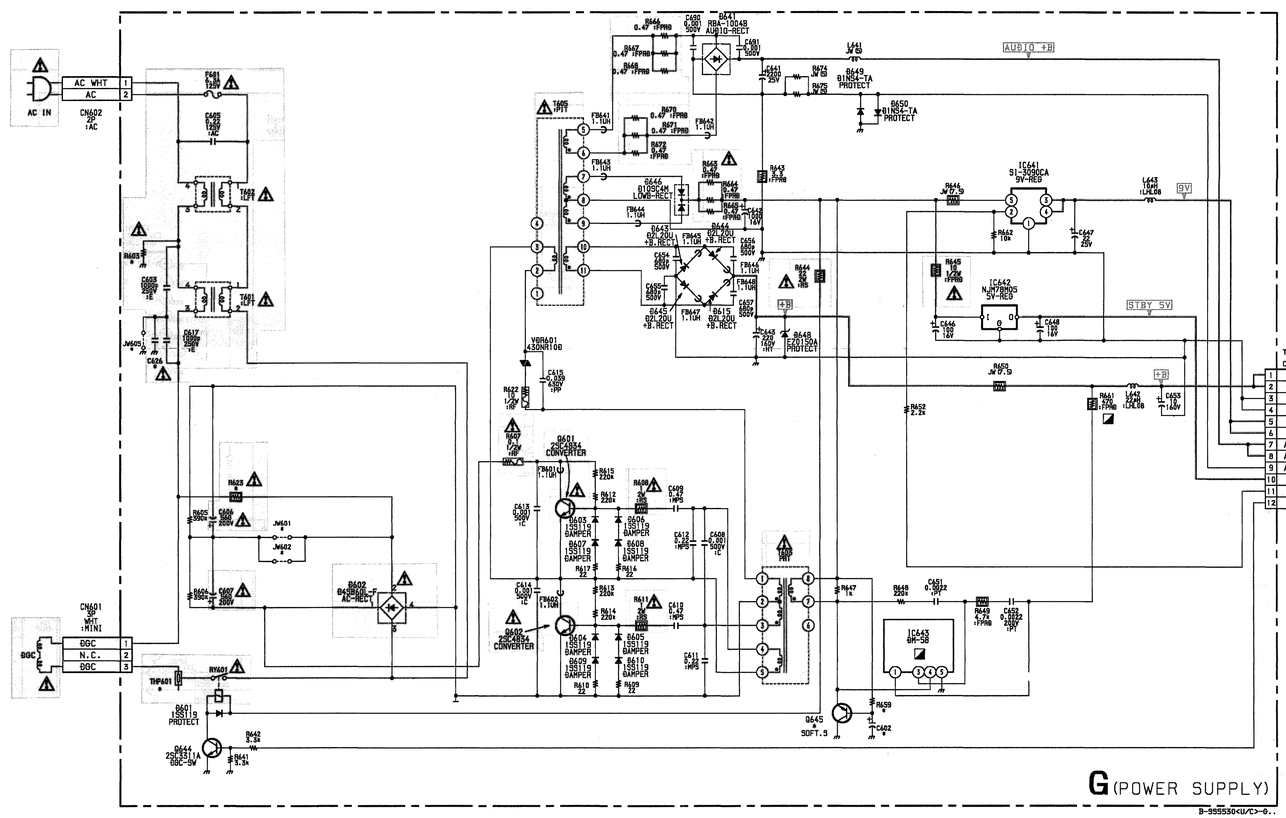
C BOARD TRANSISTOR VOLTAGE LIST

| | B | C | E |
|---|---|---|---|
| Q1761 | 2.2 | 8.2 | 1.7 |
| Q1762 | 8.7 | 134.1 | 8.2 |
| Q1763 | 134.1 | 2.3 | 132.0 |
| Q1771 | 1.8 | 8.2 | 1.3 |
| Q1772 | 8.7 | 146.4 | 8.2 |
| Q1773 | 146.4 | 2.3 | 144.1 |
| Q1781 | 2.1 | 8.2 | 1.6 |
| Q1782 | 8.7 | 133.7 | 8.2 |
| Q1783 | 133.7 | 2.3 | 131.3 |
| Q1790 | 2.2 | 0.2 | 2.5 |

All voltages are in V

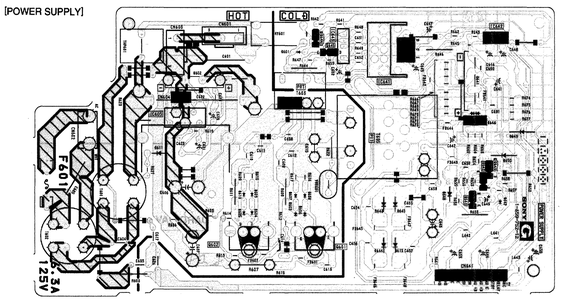
• C BOARD WAVEFORMS




G [POWER SUPPLY]

– G BOARD –




G BOARD TRANSISTOR VOLTAGE LIST

| | S | C | E |
|---|---|---|---|
| Q601 | 145.2 | 284.0 | 147.5 |
| Q602 | -1.7 | 147.5 | GND |
| Q644 | 0 | 10.5 | GND |

All voltages are in V

G BOARD IC VOLTAGE LIST

| | pin | volt |
|---|---|---|
| IC641 | 1 | GND |
| | 2 | 3.9 |
| | 3 | 8.9 |
| | 4 | 8.9 |
| | 5 | 10.5 |
| IC642 | IN | 9.5 |
| | OUT | 5.0 |
| IC643 | 1 | 135 |
| | 2 | NC |
| | 3 | 2.5 |
| | 4 | 7.8 |
| | 5 | GND |

All voltages are in V

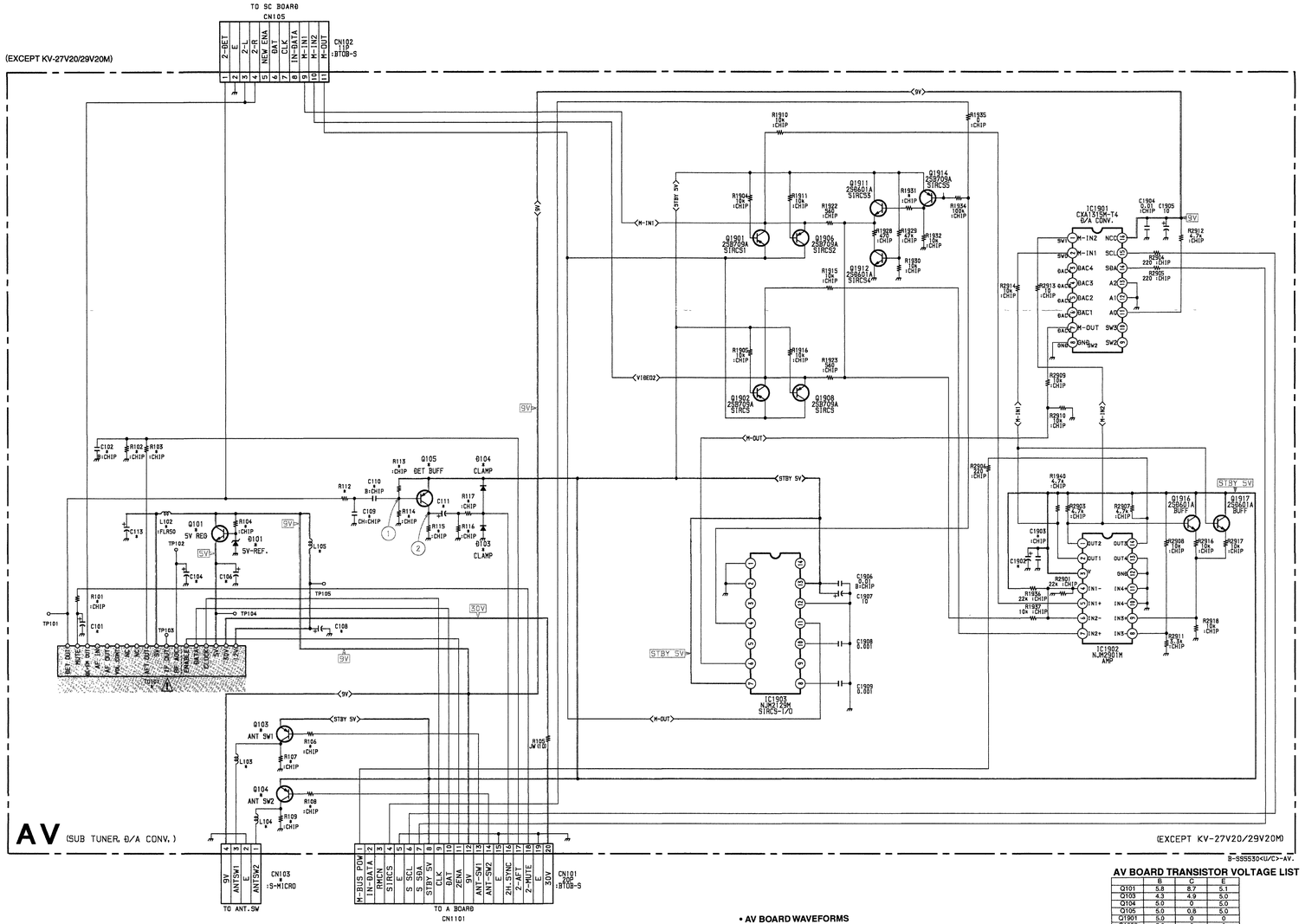
G BOARD * MARK LIST

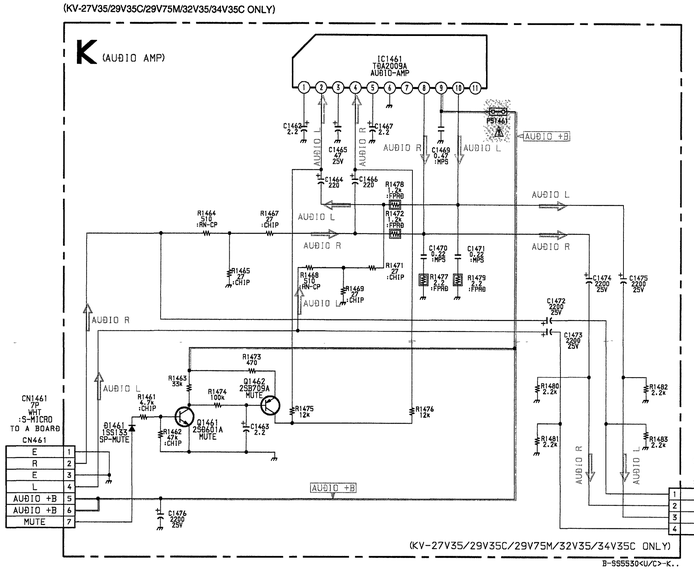
| | EXCEPT KV-29V35C/34V35C | KV-29V35C/34V35C |
|---|---|---|
| C602 | # | 4.7 |
| C626 | # | 100p 250V |
| F601 | 6.3A 125V | 6.3A 250V |
| JW601 | 5MM | # |
| JW602 | 5MM | # |
| JW605 | 7.5MM | # |
| Q645 | # | 2SA1309A |
| R633 | 2.2M 1/2W | 8.2M 1W |
| R634 | 1 .20W .RB | 3.9 .20W .RB |
| R659 | # | 10k |
| THP601 | 1-809-539-11 | 1-809-827-11 |

# Mark : not mounted

Schematic diagrams ← C, G boards

Schematic diagrams AV, K boards →




## AV BOARD * MARK LIST

| | KV-27V35/29V35C/29V75M/32V35/34V35C | KV-27V25/29V65M/32V25 |
|---|---|---|
| C101 | 1 | # |
| C102 | 0.0022 B/CHIP | # |
| C104 | 10 | # |
| C106 | 47 25V | # |
| C108 | 100 16V | # |
| C109 | 220p CH/CHIP | # |
| C110 | 0.047 B/CHIP | # |
| C111 | 1 | # |
| C113 | 220 16V | # |
| CN103 | 4P BLK /S-MICRO | # |
| D101 | MTZ4.7ZF-X/MC | # |
| D103 | 1SS133 | # |
| D104 | 1SS133 | # |
| L102 | 10uH FLR50 | # |
| L103 | JW (0) | # |
| L104 | JW (0) | # |
| L105 | 100uH FLR50 | # |
| Q101 | 2SB601A | # |
| Q103 | 2SB709A | # |
| Q104 | 2SB709A | # |
| Q105 | 2SB709A | # |
| R101 | 4.7k CHIP | # |
| R102 | 27k CHIP | # |
| R103 | 39k CHIP | # |
| R104 | 680 CHIP | # |
| R106 | 22k CHIP | # |
| R107 | 33k CHIP | # |
| R108 | 22k CHIP | # |
| R109 | 33k CHIP | # |
| R112 | 2.2k | # |
| R113 | 100k CHIP | # |
| R114 | 1M CHIP | # |
| R115 | 10k CHIP | # |
| R116 | 10k CHIP | # |
| R117 | 4.7k CHIP | # |
| TU101 | BTF-LA402 | # |

# Mark : not mounted

## AV BOARD IC VOLTAGE LIST

| | pin | volt | | pin | volt |
|---|---|---|---|---|---|
| IC1901 | 1 | 0.2 | | 7 | 0 |
| | 2 | 0.2 | | 8 | 1.3 |
| | 3 | NC | | 9 | 0 |
| | 4 | NC | | 10 | GND |
| | 5 | NC | | 11 | GND |
| | 6 | NC | | 12 | GND |
| | 7 | 0.4 | | 13 | GND |
| | 8 | GND | | 14 | 0.2 |
| | 9 | NC | IC1903 | 1 | GND |
| | 10 | NC | | 2 | GND |
| | 11 | 8.7 | | 3 | NC |
| | 12 | GND | | 4 | 5.0 |
| | 13 | GND | | 5 | NC |
| | 14 | 4.9 | | 6 | 0.2 |
| | 15 | 5.0 | | 7 | 5.0 |
| | 16 | 8.7 | | 8 | 0.4 |
| IC1902 | 1 | 0.2 | | 9 | NC |
| | 2 | 0.2 | | 10 | 0.4 |
| | 3 | 5.0 | | 11 | 0 |
| | 4 | 1.3 | | 12 | 0 |
| | 5 | 0 | | 13 | 5.0 |
| | 6 | 1.3 | | 14 | NC |

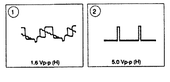
All voltages are in V

## AV BOARD TRANSISTOR VOLTAGE LIST

| | B | C | E |
|---|---|---|---|
| Q101 | 5.8 | 8.7 | 5.1 |
| Q103 | 4.3 | 4.9 | 5.0 |
| Q104 | 5.0 | 0 | 5.0 |
| Q105 | 5.0 | 0.8 | 5.0 |
| Q1901 | 5.0 | 0 | 0 |
| Q1902 | 5.0 | 0 | 0 |
| Q1906 | 5.0 | 0 | 0 |
| Q1908 | 5.0 | 0 | 0 |
| Q1911 | 0 | 5.0 | 0 |
| Q1912 | 0.7 | 0 | GND |
| Q1914 | 4.9 | 0 | 5.0 |
| Q1916 | 0.2 | 5.0 | 0 |
| Q1917 | 0.2 | 5.0 | 0 |

All voltages are in V

## • AV BOARD WAVEFORMS




## K BOARD IC VOLTAGE LIST

| | pin | volt |
|---|---|---|
| IC1461 | 1 | 1.5 |
| | 2 | 4.2 |
| | 3 | 12.2 |
| | 4 | 4.2 |
| | 5 | 1.5 |
| | 6 | GND |
| | 7 | NC |
| | 8 | 0.2 |
| | 9 | 22.1 |
| | 10 | 0.2 |
| | 11 | NC |

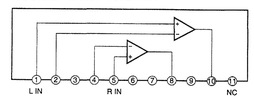
All voltages are in V

## K BOARD TRANSISTOR VOLTAGE LIST

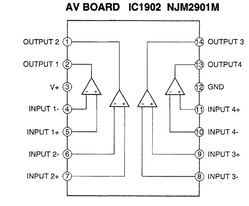
| | B | C | E |
|---|---|---|---|
| Q1461 | 0.7 | 0 | GND |
| Q1462 | 20.0 | 20.7 | 20.7 |

All voltages are in V

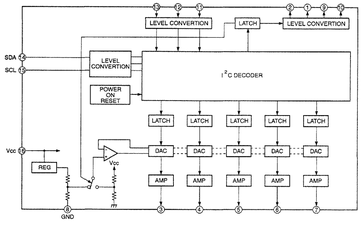
## K BOARD IC1461 TDA2009A




## AV BOARD IC1902 NJM2901M

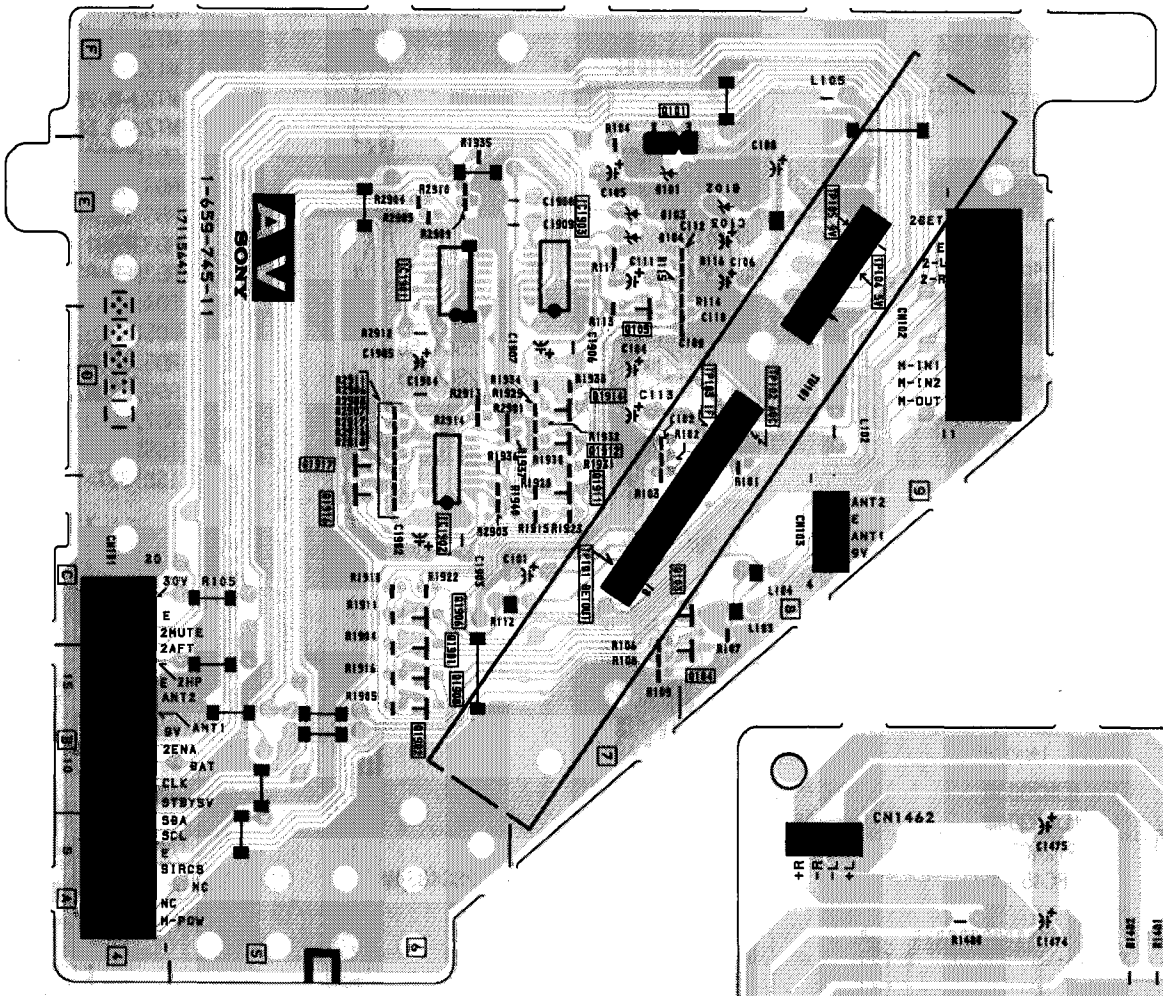



## AV BOARD IC1901 CXA1315M



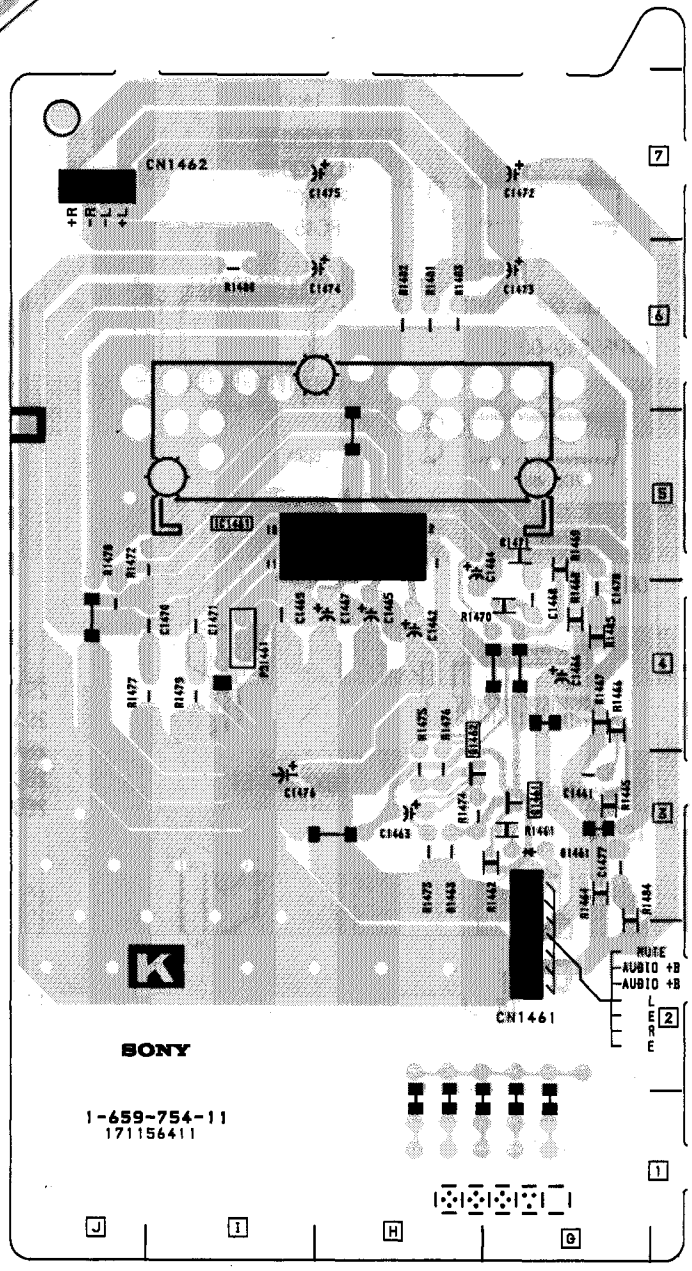
**– AV BOARD –** (EXCEPT KV-27V20/29V20M)

**AV** [SUB TUNER, D/A CONV.] **K** [AUDIO AMP]



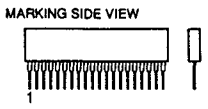

**– K BOARD –**

(KV-27V35/29V35C/29V75M/32V35/34V35C ONLY)



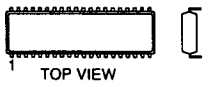
## 4-4. SEMICONDUCTORS

BH3856FS-E2



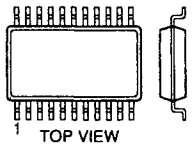

32pin SIP

CD4052BCN



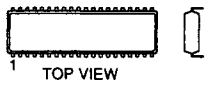

16pin DIP

CXA1315M



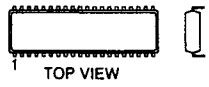

16pin SOP

CXA2025S



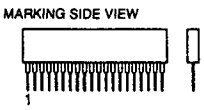

48pin DIP

CXP85640-005S



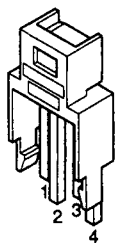

64pin DIP

DM-58

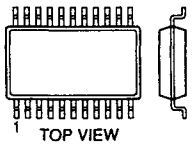



4pin SIP

IS474

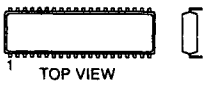



LM2901M
NJM2902M-TE2



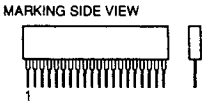

14pin SOP

MM1313AD



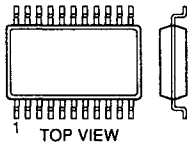

42pin DIP

NJM2129M-TE2



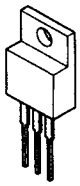

14pin SIP

NJM2903M
NJM2904M
ST24C02FM6TR
UPC4558G2

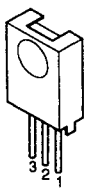



8pin SOP

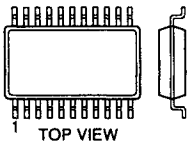
NJM78M05FA
TA7805S



SBX1790-51

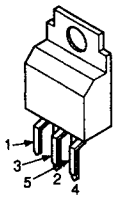



SDA9288X

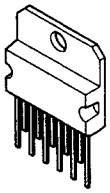



32pin SOP

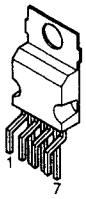
S13090CA



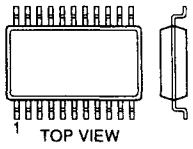

TDA2009A



TDA8172

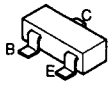



TDA8315T/N3A-T



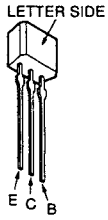

24pin SOP

2SA1037AK-T146-R
2SA1162-G
2SA1330-06
2SC1623-L5L6
2SD601A-Q

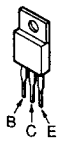



2SA1091-O

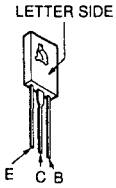
2SA1175-HFE
2SC2785-HFE



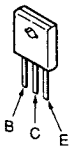

2SA1837
2SC4159-E
2SC4793



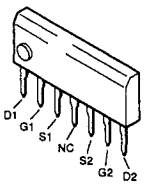

2SC2611



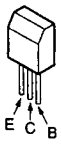

2SC4834M




2SC4927-01

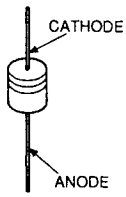



2SD774-34

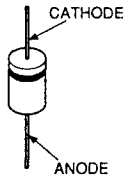



D10SC4M

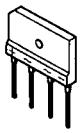
D1NS4
MTZJ-3.3
MTZJ-33A
MTZJ-6.2B
MTZJ-7.5B
RD10ESB2
RD3.3ES-B2
RD3.9ES-B2
RD33ESB1
RD39ES-B2
RD4.3ES-B3
RD5.6ESB2
RD5.6ESB3
RD6.2ESB2
RD7.5ESB2
1SS119-25
1SS133T-77



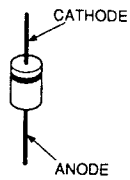

D2L20U
EGP20G
EL1Z
EZ0150AV1
GP08D
MTZJ-T-77-3.9
MTZJ-T-77-4.3C



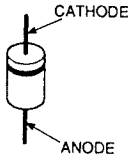

D4SB60L
RBA-1004B



ERC06-15S




ERD29-08J



# SECTION 5
# EXPLODED VIEWS

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

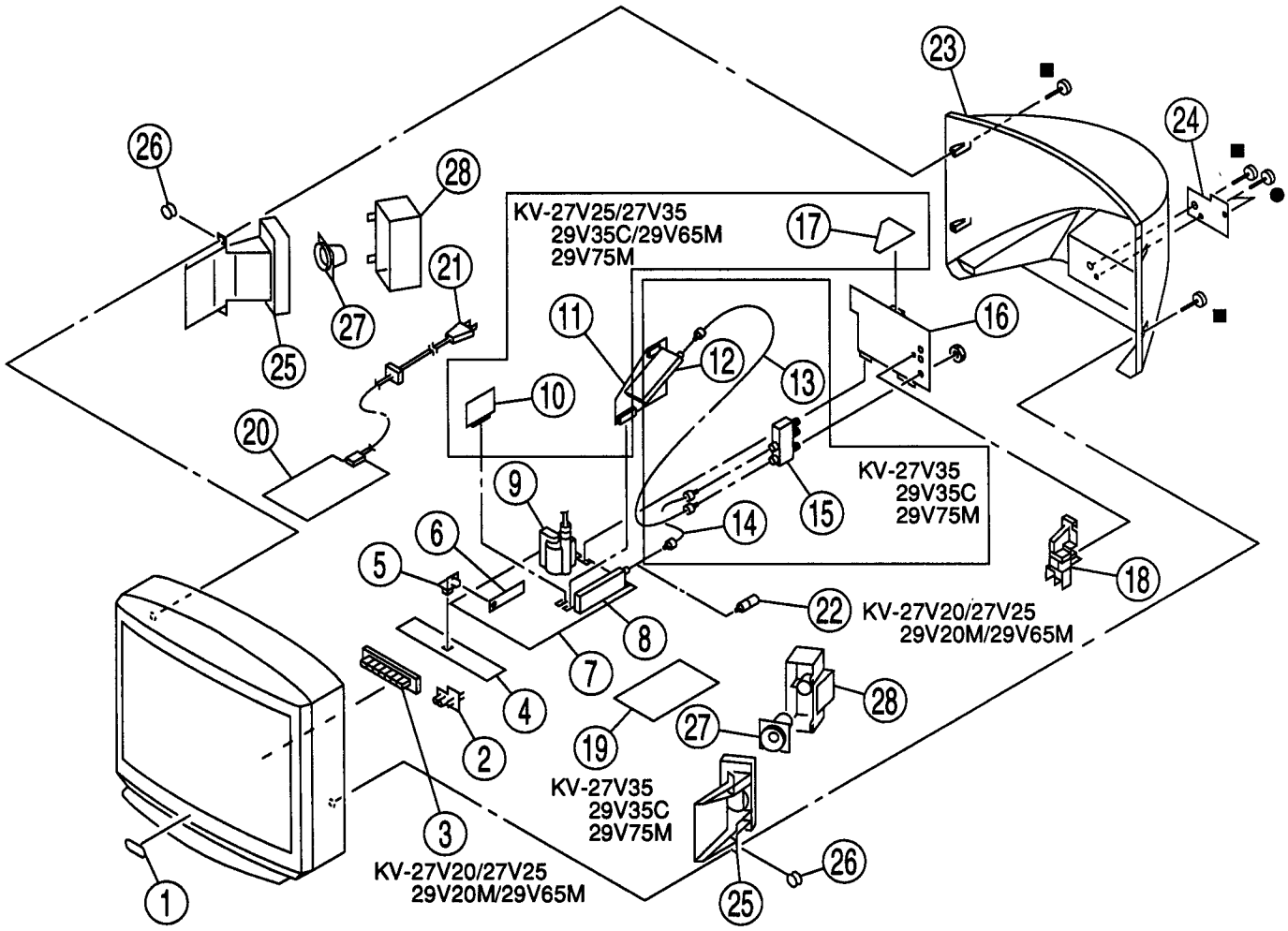
Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

NOTE:

- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

## 5-1. CHASSIS (EXCEPT KV-32V25/32V35/34V35C)

● : 7-685-648-79 +BVTP 3X12
■ : 7-685-663-79 +BVTP 4X16



The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

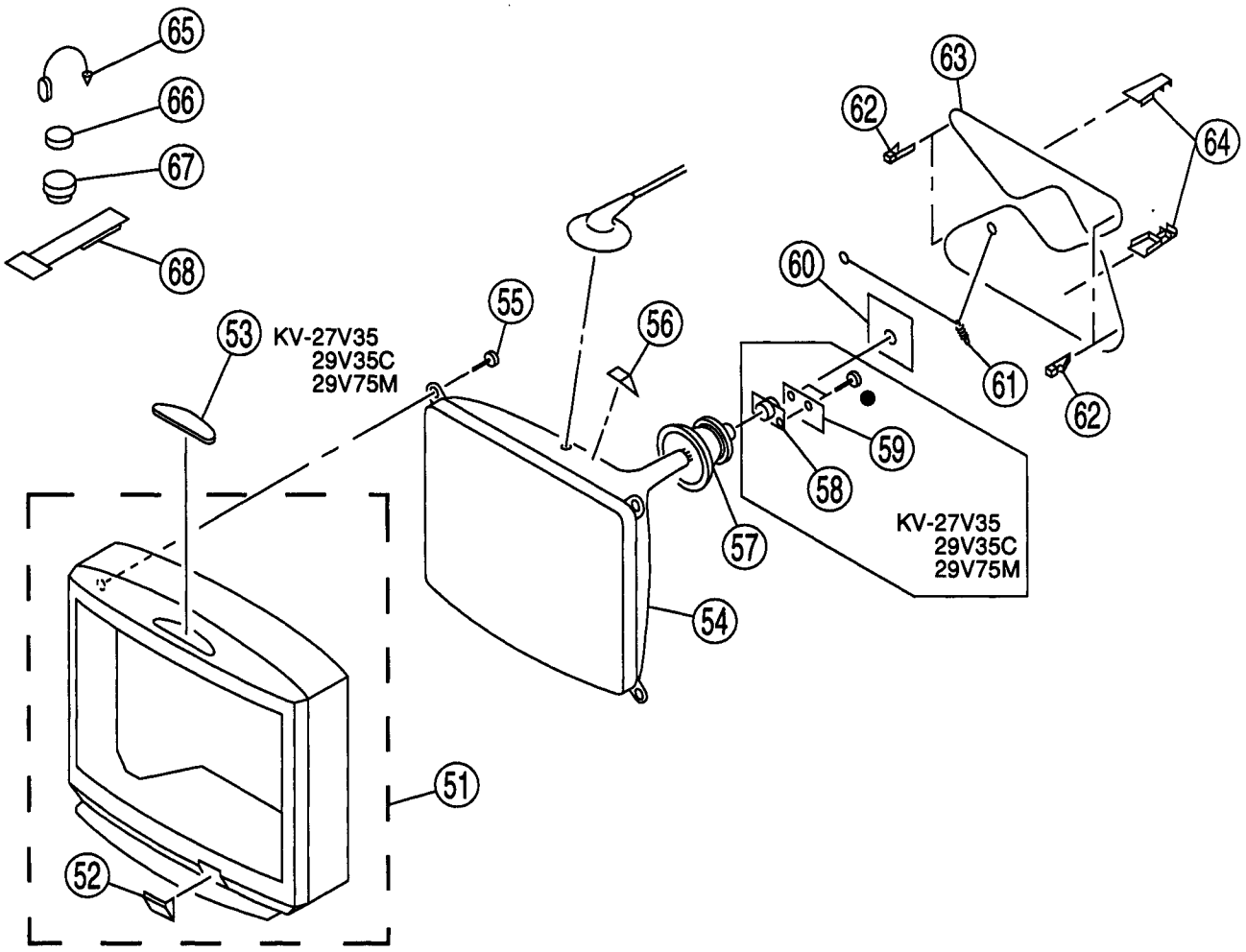
| REF. NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| 1 | 4-046-160-01 | EMBLEM (NO.9), SONY | |
| 2 | * 4-052-897-01 | GUIDE, LED | |
| 3 | 4-052-907-01 | BUTTON, MULTI | (27V20/27V25/29V20M/29V65M) |
| 4 | * A-1372-233-A | HV BOARD, COMPLETE | (27V20/27V25/29V20M/29V65M) |
| | * A-1372-234-A | HV BOARD, COMPLETE | (27V35/29V35C/29V75M) |
| 5 | * 3-696-606-02 | HINGE, VI | |
| 6 | * 1-659-757-11 | SA BOARD | |
| 7 | * A-1297-806-A | A BOARD, COMPLETE (27V20/29V20M) | |
| | * A-1297-807-A | A BOARD, COMPLETE | (27V35/29V35C/29V75M) |
| | * A-1297-851-A | A BOARD, COMPLETE (27V25/29V65M) | |
| 8 | ⚠ 8-598-340-00 | TUNER BTF-WA404 | |
| 9 | ⚠ 1-453-207-11 | TRANSFORMER ASSY, FLYBACK | (NX-2609/2X4C) |
| 10 | * A-1195-103-A | P BOARD, COMPLETE | (27V25/27V35/29V35C/29V65M/29V75M) |
| 11 | * A-1297-720-A | AV BOARD, COMPLETE | (27V35/29V35C/29V75M) |
| | * A-1297-850-A | AV BOARD, COMPLETE (27V25/29V65M) | |
| 12 | ⚠ 8-598-339-00 | TUNER BTF-LA402 (27V35/29V35C/29V75M) | |
| 13 | * 1-557-056-31 | CABLE, P-P (27V35/29V35C/29V75M) | |
| 14 | * 1-556-945-21 | CABLE, P-P (27V35/29V35C/29V75M) | |
| 15 | 8-598-358-00 | CHANGER, ANTENNA AS-2K | (27V35/29V35C/29V75M) |
| 16 | * A-1394-756-A | UV BOARD, COMPLETE (27V20/29V20M) | |
| | * A-1394-757-A | UV BOARD, COMPLETE | (27V35/29V35C/29V75M) |
| | * A-1394-772-A | U BOARD, COMPLETE (27V25/29V65M) | |
| 17 | * A-1390-585-A | SC BOARD, COMPLETE | (27V25/27V35/29V35C/29V65M/29V75M) |
| 18 | * 4-052-905-01 | BRACKET, V5/6 | |
| 19 | * A-1380-518-A | K BOARD, COMPLETE | (27V35/29V35C/29V75M) |
| 20 | * A-1316-252-A | G BOARD, COMPLETE (29V35C) | |
| | * A-1316-261-A | G BOARD, COMPLETE (except KV-29V35C) | |
| 21 | ⚠ 1-751-059-11 | CORD, POWER (WITH CONNECTOR) | 10A/125V (except KV-29V35C) |
| | ⚠ 1-769-796-21 | CORD, POWER (WITH CONNECTOR) | (29V35C) |
| 22 | 1-766-374-11 | PLUG, F-PIN (27V20/27V25/29V20M/29V65M) | |
| 23 | X-4033-615-2 | COVER ASSY, REAR | (27V20/27V25/29V20M/29V65M) |
| | X-4033-618-1 | COVER ASSY, REAR (27V35/29V35C/29V75M) | |
| 24 | 4-052-898-01 | LABEL, TERMINAL (27V35/29V35C/29V75M) | |
| | 4-052-899-01 | LABEL, TERMINAL (27V25/29V65M) | |
| | 4-053-783-01 | LABEL, TERMINAL (27V20/29V20M) | |
| 25 | 4-043-457-11 | BAFFLE, SPEAKER | |
| 26 | 4-374-745-31 | CUSHION (A) | |
| 27 | 1-504-524-11 | SPEAKER (8CM) | (27V20/27V25/29V20M/29V65M) |
| | 1-505-326-11 | SPEAKER (8CM) (27V35/29V35C/29V75M) | |
| 28 | X-4032-226-1 | COVER ASSY, SPEAKER | (27V20/27V25/29V20M/29V65M) |
| | X-4033-616-1 | COVER ASSY, SPEAKER | (27V35/29V35C/29V75M) |

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

## 5-2. PICTURE TUBE (EXCEPT KV-32V25/32V35/34V35C)

● : 7-685-648-79 +BVTP 3X12




| REF. NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| 51 | X-4033-614-2 | BEZNET ASSY (27V20/29V20M) | 52 |
| | X-4033-617-1 | BEZNET ASSY (27V35/29V35C/29V75M) | 52 |
| | X-4033-623-2 | BEZNET ASSY (27V25/29V65M) | 52 |
| 52 | 4-052-906-01 | DOOR, CONTROL | |
| 53 | 1-473-549-11 | SWITCH BLOCK, CONTROL | (27V35/29V35C/29V75M) |
| 54 | ⚠ 8-733-848-05 | PICTURE TUBE 29PXD (A68KZJ50X) | (except 29V35C) |
| | ⚠ 8-733-849-05 | PICTURE TUBE 29PXD (A68KZJ50X) | (29V35C) |
| 55 | 4-041-268-01 | SCREW (7), TAPPING | |
| 56 | 4-053-005-01 | SPACER, DEFLECTION YOKE | |
| 57 | ⚠ 8-451-275-42 | DEFLECTION YOKE Y28PFA | |

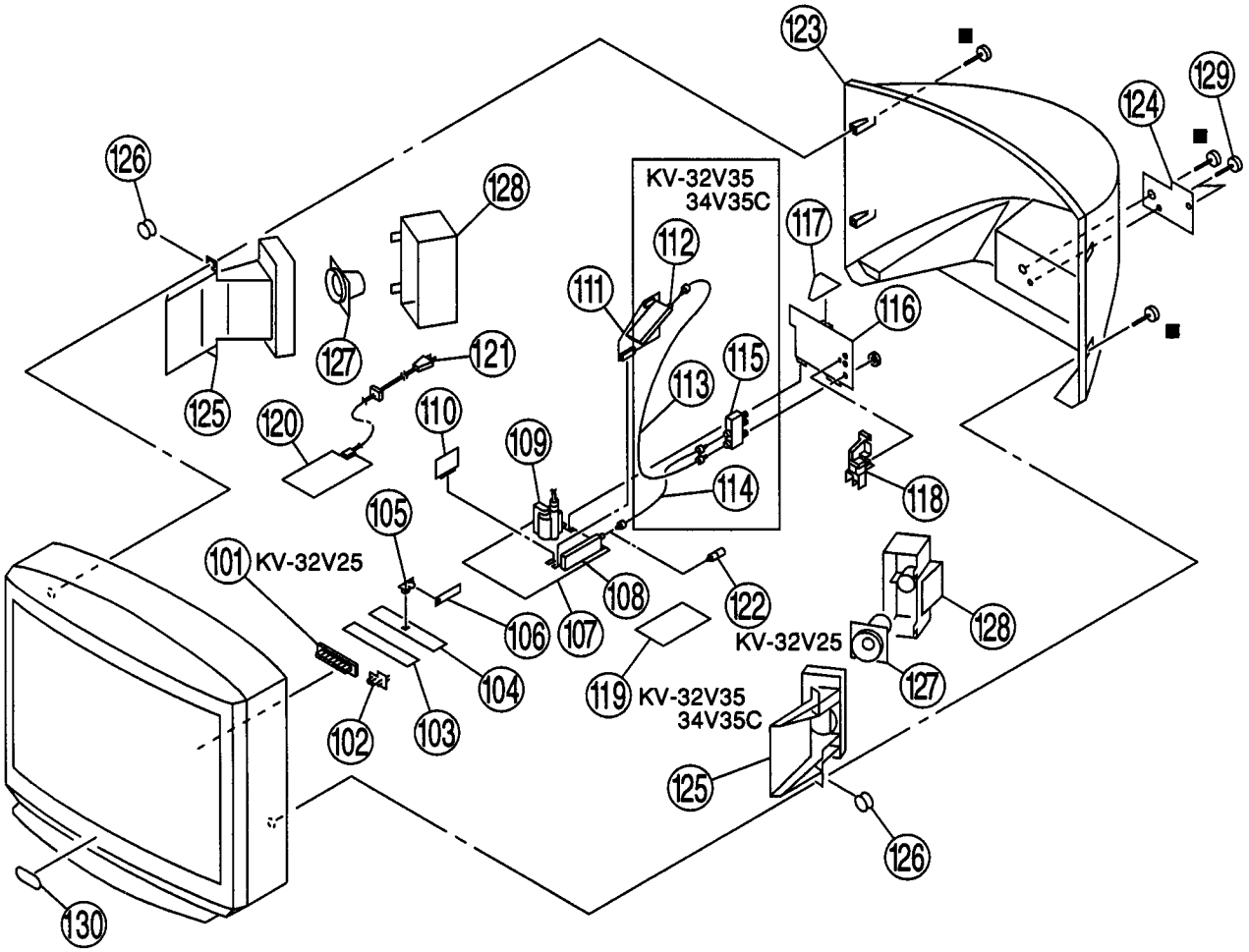
| REF. NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| 58 | ⚠ 1-452-509-42 | NECK ASSY, PICTURE TUBE (NA-308) | (27V35/29V35C/29V75M) |
| 59 | * A-1372-225-A | WB BOARD, COMPLETE | (27V35/29V35C/29V75M) |
| 60 | * A-1331-549-A | C BOARD, COMPLETE | |
| 61 | 4-036-329-01 | SPRING (B), TENSION | |
| 62 | 4-040-388-01 | HOLDER (S), DGC | |
| 63 | ⚠ 1-406-726-13 | COIL, DEGAUSSING | |
| 64 | 4-040-387-01 | HOLDER (M), DGC | |
| 65 | 4-308-870-00 | CLIP, LEAD WIRE | |
| 66 | 1-452-032-00 | MAGNET, DISC ; 10MM $\phi$ | |
| 67 | 1-452-094-00 | MAGNET, ROTATABLE DISK ; 15MM $\phi$ | |
| 68 | 4-051-737-21 | PIECE A(100), CONV. CORRECT | |

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

## 5-3. CHASSIS (KV-32V25/32V35/34V35C)

■ : 7-685-663-79 +BVTP 4X16



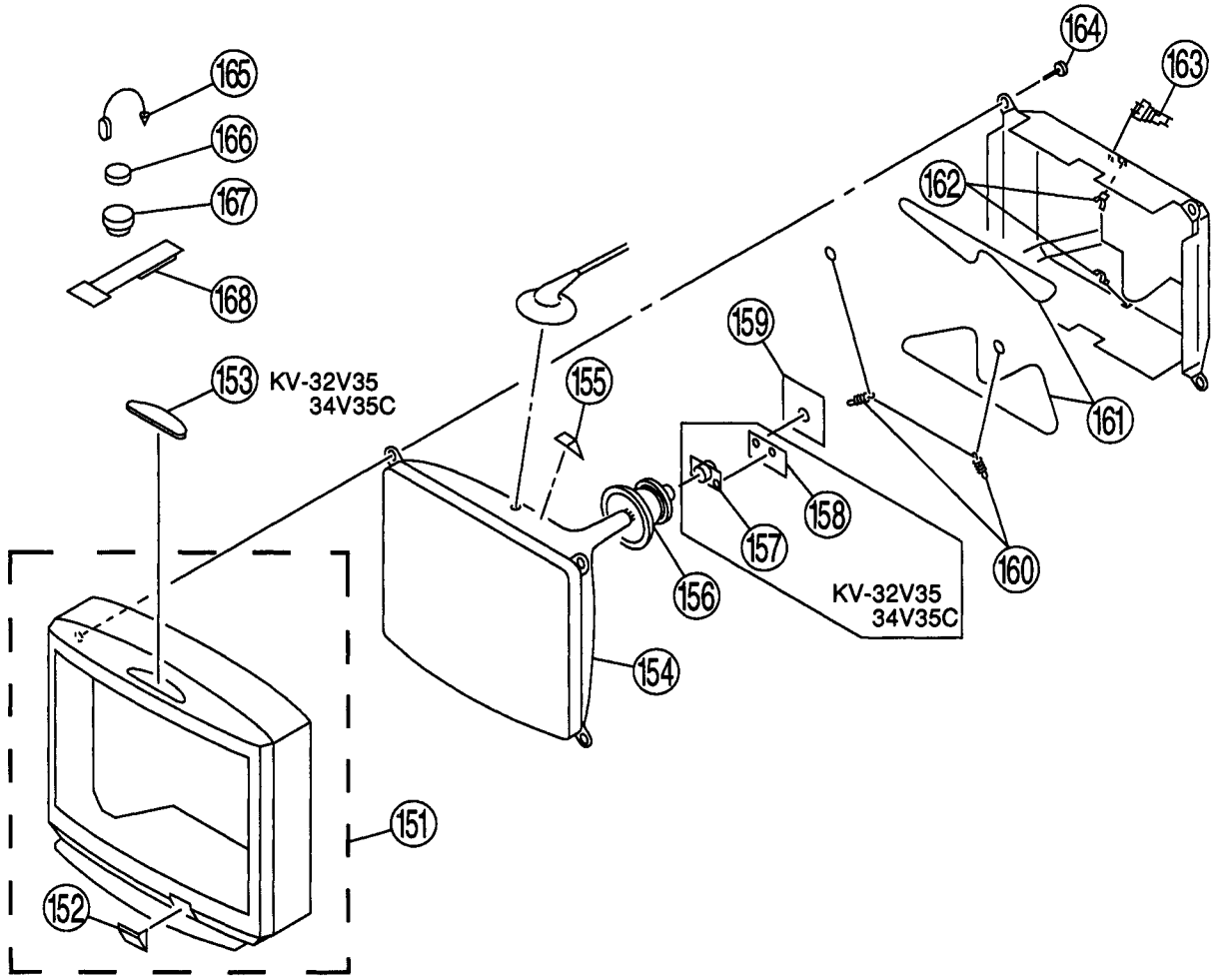

| REF. NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| 101 | 4-052-907-01 | BUTTON, MULTI (32V25) | |
| 102 | * 4-052-897-01 | GUIDE, LED | |
| 103 | * A-1372-207-A | HV BOARD, COMPLETE (32V25 (US)) | |
| | * A-1372-212-A | HV BOARD, COMPLETE (except KV-32V25 (US)) | |
| 104 | * A-1372-209-A | HS BOARD, COMPLETE | |
| 105 | * 3-696-606-02 | HINGE, VI | |
| 106 | * 1-659-757-11 | SA BOARD | |
| 107 | * A-1297-812-A | A BOARD, COMPLETE (32V35/34V35C) | |
| | * A-1297-862-A | A BOARD, COMPLETE (32V25) | |
| 108 | ⚠ 8-598-340-00 | TUNER BTF-WA404 | |
| 109 | ⚠ 1-453-207-11 | TRANSFORMER ASSY, FLYBACK (NX-2609//X4C) | |
| 110 | * A-1195-103-A | P BOARD, COMPLETE | |
| 111 | * A-1297-720-A | AV BOARD, COMPLETE (32V35/34V35C) | |
| | * A-1297-850-A | AV BOARD, COMPLETE (32V25) | |
| 112 | ⚠ 8-598-339-00 | TUNER BTF-LA402 (32V35/34V35C) | |
| 113 | * 1-557-056-31 | CABLE, P-P (32V35/34V35C) | |
| 114 | * 1-556-945-21 | CABLE, P-P (32V35/34V35C) | |
| 115 | 8-598-358-00 | CHANGER, ANTENNA AS-2K (32V35/34V35C) | |
| 116 | * A-1394-720-A | UV BOARD, COMPLETE (32V35/34V35C) | |
| | * A-1394-778-A | UV BOARD, COMPLETE (32V25) | |

| REF. NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| 117 | * A-1390-585-A | SC BOARD, COMPLETE | |
| 118 | * 4-052-905-01 | BRACKET, V5/6 | |
| 119 | * A-1380-518-A | K BOARD, COMPLETE (32V35/34V35C) | |
| 120 | * A-1316-252-A | G BOARD, COMPLETE (34V35C) | |
| | * A-1316-261-A | G BOARD, COMPLETE (32V25/32V35) | |
| 121 | ⚠ 1-751-059-11 | CORD, POWER (WITH CONNECTOR) 10A/125V (32V25/32V35) | |
| | ⚠ 1-769-796-21 | CORD, POWER (WITH CONNECTOR) (34V35C) | |
| 122 | 1-766-374-11 | PLUG, F-PIN (32V25) | |
| 123 | 4-053-766-01 | COVER, REAR (32V35/34V35C) | |
| | 4-053-766-11 | COVER, REAR (32V25) | |
| 124 | 4-052-898-01 | LABEL, TERMINAL (32V35/34V35C) | |
| | 4-052-899-01 | LABEL, TERMINAL (32V25) | |
| 125 | 4-043-457-11 | BAFFLE, SPEAKER | |
| 126 | 4-374-745-31 | CUSHION (A) | |
| 127 | 1-504-524-11 | SPEAKER (8CM) (32V25) | |
| | 1-505-326-11 | SPEAKER (8CM) (32V35/34V35C) | |
| 128 | X-4032-226-1 | COVER ASSY, SPEAKER (32V25) | |
| | X-4033-616-1 | COVER ASSY, SPEAKER (32V35/34V35C) | |
| 129 | 4-041-165-01 | SCREW (3X12), TAPPING, +BV | |
| 130 | 4-046-160-01 | EMBLEM (NO.9), SONY | |

## 5-4. PICTURE TUBE (KV-32V25/32V35/34V35C)

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.




| REF. NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| 151 | X-4033-669-1 | BEZNET ASSY (32V35/34V35C) | 152 |
| | X-4033-670-1 | BEZNET ASSY (32V25) | 152 |
| 152 | 4-052-906-01 | DOOR, CONTROL (32V25) | |
| | 4-052-906-11 | DOOR, CONTROL (32V35/34V35C) | |
| 153 | 1-473-549-11 | SWITCH BLOCK, CONTROL (32V35/34V35C) | |
| 154 | ⚠ 8-733-742-05 | PICTURE TUBE 34FXD2 (M80JYV51X) | (34V35C) |
| | ⚠ 8-733-743-05 | PICTURE TUBE 34FXD2 (M80JYV51X) | (32V25/32V35) |
| 155 | 4-041-361-01 | SPACER, DEFLECTION YOKE (34V35C) | |
| | 4-053-005-01 | SPACER, DEFLECTION YOKE (32V25/32V35) | |
| 156 | ⚠ 8-451-482-11 | DEFLECTION YOKE Y34FXA2-V | |
| 157 | ⚠ 1-452-579-21 | NECK ASSY, PICTURE TUBE (NA322) | (32V35/34V35C) |

| REF. NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| 158 | * A-1372-225-A | WB BOARD, COMPLETE (32V35/34V35C) | |
| 159 | * A-1331-549-A | C BOARD, COMPLETE | |
| 160 | 4-036-329-01 | SPRING (B), TENSION | |
| 161 | ⚠ 1-402-952-12 | COIL, DEMAGNETIZATION (32V25/32V35) | |
| | ⚠ 1-411-474-11 | COIL, DEMAGNETIZATION (34V35C) | |
| 162 | * 4-371-629-01 | STOPPER, WIRE | |
| 163 | 4-033-681-01 | HOLDER, LEAD | |
| 164 | 4-041-268-01 | SCREW (7), TAPPING | |
| 165 | 4-308-870-00 | CLIP, LEAD WIRE | |
| 166 | 1-452-032-00 | MAGNET, DISC ; 10MM $\phi$ | |
| 167 | 1-452-094-00 | MAGNET, ROTATABLE DISK ; 15MM $\phi$ | |
| 168 | 4-051-737-21 | PIECE A (100), CONV. CORRECT | |

# SECTION 6
# ELECTRICAL PARTS LIST

**P**

NOTE:

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

- The components identified by ⊠ in this manual have been carefully factory-selected for each set in order to satisfy regulations regarding X-ray radiation. Should replacement be required, replace only with the value originally used.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F : nonflammable

When indicating parts by reference number, please include the board name.

- CAPACITORS
  PF : μμ F
- There are some cases the reference number on one board overlaps on the other board. Therefore, when ordering parts by the reference number, please include the board name.

| REF. NO. | PART NO. | DESCRIPTION | | | REMARK |
|---|---|---|---|---|---|
| | * A-1195-103-A | P BOARD, COMPLETE | | | |
| | | ********** | | | |
| | | | | | (except 27V20/29V20M) |
| | | <CAPACITOR> | | | |
| C3301 | 1-163-017-00 | CERAMIC CHIP | 0.0047MF | 10% | 50V |
| C3302 | 1-164-346-11 | CERAMIC CHIP | 1MF | | 16V |
| C3303 | 1-163-038-91 | CERAMIC CHIP | 0.1MF | | 25V |
| C3304 | 1-124-903-11 | ELECT | 1MF | 20% | 50V |
| C3305 | 1-163-038-91 | CERAMIC CHIP | 0.1MF | | 25V |
| C3306 | 1-126-967-11 | ELECT | 47MF | 20% | 16V |
| C3307 | 1-163-038-91 | CERAMIC CHIP | 0.1MF | | 25V |
| C3308 | 1-163-231-11 | CERAMIC CHIP | 15PF | 5% | 50V |
| C3309 | 1-163-017-00 | CERAMIC CHIP | 0.0047MF | 10% | 50V |
| C3310 | 1-164-004-11 | CERAMIC CHIP | 0.1MF | 10% | 25V |
| C3313 | 1-163-038-91 | CERAMIC CHIP | 0.1MF | | 25V |
| C3314 | 1-163-038-91 | CERAMIC CHIP | 0.1MF | | 25V |
| C3315 | 1-164-346-11 | CERAMIC CHIP | 1MF | | 16V |
| C3319 | 1-163-031-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C3320 | 1-124-903-11 | ELECT | 1MF | 20% | 50V |
| C3321 | 1-163-239-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| C3322 | 1-163-239-11 | CERAMIC CHIP | 33PF | 5% | 50V |
| C3323 | 1-163-031-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C3324 | 1-126-967-11 | ELECT | 47MF | 20% | 16V |
| C3325 | 1-163-038-91 | CERAMIC CHIP | 0.1MF | | 25V |
| C3326 | 1-163-038-91 | CERAMIC CHIP | 0.1MF | | 25V |
| C3327 | 1-163-038-91 | CERAMIC CHIP | 0.1MF | | 25V |
| C3328 | 1-126-967-11 | ELECT | 47MF | 20% | 16V |
| C3329 | 1-126-967-11 | ELECT | 47MF | 20% | 16V |
| C3330 | 1-163-031-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C3331 | 1-126-967-11 | ELECT | 47MF | 20% | 16V |
| C3332 | 1-104-664-11 | ELECT | 47MF | 20% | 25V |
| C3333 | 1-164-695-11 | CERAMIC CHIP | 0.0022MF | 5% | 50V |
| C3334 | 1-163-031-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C3335 | 1-163-038-91 | CERAMIC CHIP | 0.1MF | | 25V |
| C3336 | 1-163-038-91 | CERAMIC CHIP | 0.1MF | | 25V |
| C3337 | 1-164-005-11 | CERAMIC CHIP | 0.47MF | | 25V |
| C3338 | 1-163-141-00 | CERAMIC CHIP | 0.001MF | 5% | 50V |
| C3340 | 1-163-031-11 | CERAMIC CHIP | 0.01MF | | 50V |
| C3346 | 1-163-251-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C3347 | 1-124-903-11 | ELECT | 1MF | 20% | 50V |
| C3348 | 1-126-967-11 | ELECT | 47MF | 20% | 16V |
| C3349 | 1-163-121-00 | CERAMIC CHIP | 150PF | 5% | 50V |
| C3350 | 1-164-004-11 | CERAMIC CHIP | 0.1MF | 10% | 25V |
| C3351 | 1-163-251-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| | | <CONNECTOR> | | | |
| CN3301 | * 1-764-816-11 | CONNECTOR, BOARD TO BOARD 20P | | | |
| | | <IC> | | | |
| IC3301 | 8-759-366-24 | IC TDA8315T/N3A-T | | | |
| IC3302 | 8-759-231-53 | IC TA7805S | | | |
| IC3303 | 8-759-361-12 | IC SDA9288X | | | |
| | | <COIL> | | | |
| L3301 | 1-408-413-00 | INDUCTOR 22UH | | | |
| L3302 | 1-410-473-11 | INDUCTOR 18UH | | | |
| L3303 | 1-408-418-00 | INDUCTOR 56UH | | | |
| | | <TRANSISTOR> | | | |
| Q3301 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | | | |
| Q3305 | 8-729-216-22 | TRANSISTOR 2SA1162-G | | | |
| Q3306 | 8-729-216-22 | TRANSISTOR 2SA1162-G | | | |
| Q3307 | 8-729-216-22 | TRANSISTOR 2SA1162-G | | | |
| Q3308 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | | | |
| Q3310 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | | | |
| Q3312 | 8-729-216-22 | TRANSISTOR 2SA1162-G | | | |
| Q3313 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | | | |
| | | <RESISTOR> | | | |
| R3301 | 1-216-075-00 | METAL GLAZE | 12K | 5% | 1/10W |
| R3302 | 1-216-043-91 | METAL GLAZE | 560 | 5% | 1/10W |
| R3303 | 1-216-295-91 | CONDUCTOR, CHIP | | | |
| R3304 | 1-216-043-91 | METAL GLAZE | 560 | 5% | 1/10W |
| R3306 | 1-215-882-00 | METAL OXIDE | 22 | 5% | 2W F |
| R3307 | 1-216-097-91 | METAL GLAZE | 100K | 5% | 1/10W |
| R3308 | 1-216-051-00 | METAL GLAZE | 1.2K | 5% | 1/10W |
| R3309 | 1-216-051-00 | METAL GLAZE | 1.2K | 5% | 1/10W |
| R3310 | 1-216-689-11 | METAL GLAZE | 39K | 5% | 1/10W |
| R3311 | 1-216-689-11 | METAL GLAZE | 39K | 5% | 1/10W |
| R3312 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W |
| R3313 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W |
| R3314 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W |
| R3315 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W |
| R3316 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W |
| R3319 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W |
| R3321 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W |
| R3322 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W |
| R3323 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W |
| R3324 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W |
| R3326 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W |
| R3327 | 1-216-031-00 | METAL GLAZE | 180 | 5% | 1/10W |
| R3328 | 1-216-037-00 | METAL GLAZE | 330 | 5% | 1/10W |
| R3329 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W |
| R3330 | 1-216-035-00 | METAL GLAZE | 270 | 5% | 1/10W |
| R3331 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R3332 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W |
| R3337 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R3338 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R3339 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W |
| R3340 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W |
| R3341 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W |
| R3342 | 1-216-057-00 | METAL GLAZE | 2.2K | 5% | 1/10W |
| R3343 | 1-216-049-91 | METAL GLAZE | 1K | 5% | 1/10W |
| R3346 | 1-216-049-91 | METAL GLAZE | 1K | 5% | 1/10W |

P AV

| REF. NO. | PART NO. | DESCRIPTION | | | REMARK |
|---|---|---|---|---|---|
| R3351 | 1-216-295-91 | CONDUCTOR, CHIP | | | |
| R3352 | 1-216-049-91 | METAL GLAZE 1K | 5% | 1/10W | |
| R3358 | 1-216-047-91 | METAL GLAZE 820 | 5% | 1/10W | |
| R3359 | 1-216-047-91 | METAL GLAZE 820 | 5% | 1/10W | |
| R3360 | 1-216-053-00 | METAL GLAZE 1.5K | 5% | 1/10W | |
| R3361 | 1-216-053-00 | METAL GLAZE 1.5K | 5% | 1/10W | |
| R3362 | 1-216-029-00 | METAL GLAZE 150 | 5% | 1/10W | |
| R3363 | 1-216-031-00 | METAL GLAZE 180 | 5% | 1/10W | |
| R3364 | 1-216-035-00 | METAL GLAZE 270 | 5% | 1/10W | |
| R3365 | 1-216-105-91 | METAL GLAZE 220K | 5% | 1/10W | |
| R3366 | 1-216-105-91 | METAL GLAZE 220K | 5% | 1/10W | |
| R3367 | 1-216-095-00 | METAL GLAZE 82K | 5% | 1/10W | |
| R3368 | 1-216-103-00 | METAL GLAZE 180K | 5% | 1/10W | |
| R3369 | 1-216-101-00 | METAL GLAZE 150K | 5% | 1/10W | |
| R3370 | 1-216-041-00 | METAL GLAZE 470 | 5% | 1/10W | |
| R3371 | 1-216-095-00 | METAL GLAZE 82K | 5% | 1/10W | |
| R3372 | 1-216-041-00 | METAL GLAZE 470 | 5% | 1/10W | |
| R3373 | 1-216-035-00 | METAL GLAZE 270 | 5% | 1/10W | |
| | | <CRYSTAL> | | | |
| X3301 | 1-567-505-11 | OSCILLATOR, CRYSTAL | | | |
| X3302 | 1-760-095-21 | VIBRATOR, CRYSTAL | | | |
| ********** | | | | | |
| | * A-1297-720-A | AV BOARD, COMPLETE | | | |
| | | ********** | | | |
| | | (KV-27V35/29V35C/29V75M/32V35/34V35C) | | | |
| | * A-1297-850-A | AV BOARD, COMPLETE | | | |
| | | ********** | | | |
| | | (KV-27V25/29V65M/32V25) | | | |
| | | <CAPACITOR> | | | |
| C101 | 1-124-903-11 | ELECT 1MF | 20% | 50V | |
| | | (except 27V25/29V65M/32V25) | | | |
| C102 | 1-164-161-11 | CERAMIC CHIP 0.0022MF | 10% | 50V | |
| | | (except 27V25/29V65M/32V25) | | | |
| C104 | 1-126-964-11 | ELECT 10MF | 20% | 50V | |
| | | (except 27V25/29V65M/32V25) | | | |
| C106 | 1-104-664-11 | ELECT 47MF | 20% | 25V | |
| | | (except 27V25/29V65M/32V25) | | | |
| C108 | 1-126-933-11 | ELECT 100MF | 20% | 16V | |
| | | (except 27V25/29V65M/32V25) | | | |
| C109 | 1-163-125-00 | CERAMIC CHIP 220PF | 5% | 50V | |
| | | (except 27V25/29V65M/32V25) | | | |
| C110 | 1-104-760-11 | CERAMIC CHIP 0.047MF | 10% | 50V | |
| | | (except 27V25/29V65M/32V25) | | | |
| C111 | 1-124-903-11 | ELECT 1MF | 20% | 50V | |
| | | (except 27V25/29V65M/32V25) | | | |
| C113 | 1-126-934-11 | ELECT 220MF | 20% | 16V | |
| | | (except 27V25/29V65M/32V25) | | | |
| C1902 | 1-126-964-11 | ELECT 10MF | 20% | 50V | |
| C1903 | 1-102-129-00 | CERAMIC 0.01MF | 10% | 50V | |
| C1904 | 1-102-129-00 | CERAMIC 0.01MF | 10% | 50V | |
| C1905 | 1-126-964-11 | ELECT 10MF | 20% | 50V | |
| C1906 | 1-102-129-00 | CERAMIC 0.01MF | 10% | 50V | |
| C1907 | 1-126-964-11 | ELECT 10MF | 20% | 50V | |
| C1908 | 1-102-074-00 | CERAMIC 0.001MF | 10% | 50V | |
| C1909 | 1-102-074-00 | CERAMIC 0.001MF | 10% | 50V | |
| | | <CONNECTOR> | | | |
| CN101 | 1-573-301-21 | CONNECTOR, BOARD TO BOARD 20P | | | |
| CN102 | 1-573-979-21 | CONNECTOR, BOARD TO BOARD 11P | | | |
| CN103 | * 1-564-507-11 | PLUG, CONNECTOR 4P | | | |
| | | (except 27V25/29V65M/32V25) | | | |

| REF. NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| | | <DIODE> | |
| D101 | 8-719-109-89 | DIODE RD5.6ESB2 | |
| | | (except 27V25/29V65M/32V25) | |
| D103 | 8-719-991-33 | DIODE 1SS133T-77 | |
| | | (except 27V25/29V65M/32V25) | |
| D104 | 8-719-991-33 | DIODE 1SS133T-77 | |
| | | (except 27V25/29V65M/32V25) | |
| | | <IC> | |
| IC1901 | 8-752-058-68 | IC CXA1315M | |
| IC1902 | 8-759-981-61 | IC LM2901M | |
| IC1903 | 8-759-356-27 | IC NJM2129M-TE2 | |
| | | <COIL> | |
| L102 | 1-410-470-11 | INDUCTOR 10UH | |
| | | (except 27V25/29V65M/32V25) | |
| L105 | 1-408-421-00 | INDUCTOR 100UH | |
| | | (except 27V25/29V65M/32V25) | |
| | | <TRANSISTOR> | |
| Q101 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | |
| | | (except 27V25/29V65M/32V25) | |
| Q103 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| | | (except 27V25/29V65M/32V25) | |
| Q104 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| | | (except 27V25/29V65M/32V25) | |
| Q105 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| | | (except 27V25/29V65M/32V25) | |
| Q1901 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| Q1902 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| Q1906 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| Q1908 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| Q1911 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | |
| Q1912 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | |
| Q1914 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| Q1916 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | |
| Q1917 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | |
| | | <RESISTOR> | |
| R101 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| | | (except 27V25/29V65M/32V25) | |
| R102 | 1-216-083-00 | METAL GLAZE 27K 5% 1/10W | |
| | | (except 27V25/29V65M/32V25) | |
| R103 | 1-216-689-11 | METAL GLAZE 39K 5% 1/10W | |
| | | (except 27V25/29V65M/32V25) | |
| R104 | 1-216-045-00 | METAL GLAZE 680 5% 1/10W | |
| | | (except 27V25/29V65M/32V25) | |
| R106 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W | |
| | | (except 27V25/29V65M/32V25) | |
| R107 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W | |
| | | (except 27V25/29V65M/32V25) | |
| R108 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W | |
| | | (except 27V25/29V65M/32V25) | |
| R109 | 1-216-081-00 | METAL GLAZE 22K 5% 1/10W | |
| | | (except 27V25/29V65M/32V25) | |
| R112 | 1-249-421-11 | CARBON 2.2K 5% 1/4W | |
| | | (except 27V25/29V65M/32V25) | |
| R113 | 1-216-097-91 | METAL GLAZE 100K 5% 1/10W | |
| | | (except 27V25/29V65M/32V25) | |
| R114 | 1-216-121-91 | METAL GLAZE 1M 5% 1/10W | |
| | | (except 27V25/29V65M/32V25) | |
| R115 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| | | (except 27V25/29V65M/32V25) | |
| R116 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| | | (except 27V25/29V65M/32V25) | |
| R117 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| | | (except 27V25/29V65M/32V25) | |
| R1904 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |

# AV A

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The componants identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

| REF. NO. | PART NO. | DESCRIPTION | | | REMARK |
|---|---|---|---|---|---|
| R1905 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R1910 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R1911 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R1915 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R1916 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R1922 | 1-216-043-91 | METAL GLAZE | 560 | 5% | 1/10W |
| R1923 | 1-216-043-91 | METAL GLAZE | 560 | 5% | 1/10W |
| R1928 | 1-216-041-00 | METAL GLAZE | 470 | 5% | 1/10W |
| R1929 | 1-216-089-91 | METAL GLAZE | 47K | 5% | 1/10W |
| R1930 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R1931 | 1-216-025-91 | METAL GLAZE | 100 | 5% | 1/10W |
| R1932 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R1934 | 1-216-097-91 | METAL GLAZE | 100K | 5% | 1/10W |
| R1935 | 1-216-295-91 | CONDUCTOR, CHIP | | | |
| R1936 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W |
| R1937 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R1940 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W |
| R2901 | 1-216-081-00 | METAL GLAZE | 22K | 5% | 1/10W |
| R2903 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W |
| R2904 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R2905 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R2906 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R2907 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W |
| R2908 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R2909 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R2910 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R2911 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W |
| R2912 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R2913 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R2914 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R2916 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R2917 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R2918 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |

<TUNER>

TU101 ⚠ 8-598-339-00 TUNER BTF-LA402 (except 27V25/29V65M/32V25)

**********

* A-1297-806-A A BOARD, COMPLETE
**********
(KV-27V20/29V20M)

* A-1297-807-A A BOARD, COMPLETE
**********
(KV-27V35/29V35C/29V75M)

* A-1297-812-A A BOARD, COMPLETE
**********
(KV-32V35/34V35C)

* A-1297-851-A A BOARD, COMPLETE
**********
(KV-27V25/29V65M)

* A-1297-862-A A BOARD, COMPLETE (KV-32V25)
**********

* 4-051-927-01 CASE, SHIELD
4-382-854-11 SCREW (M3X10), P, SW (+)

<CAPACITOR>

| | | | | | |
|---|---|---|---|---|---|
| C001 | 1-163-125-00 | CERAMIC CHIP | 220PF | 5% | 50V |
| C003 | 1-104-760-11 | CERAMIC CHIP | 0.047MF | 10% | 50V |
| C005 | 1-124-903-11 | ELECT | 1MF | 20% | 50V |
| C009 | 1-126-967-11 | ELECT | 47MF | 20% | 50V |
| C010 | 1-163-033-91 | CERAMIC CHIP | 0.022MF | | 50V |
| C011 | 1-163-017-00 | CERAMIC CHIP | 0.0047MF | 10% | 50V |
| C012 | 1-164-005-11 | CERAMIC CHIP | 0.47MF | | 25V |
| C013 | 1-163-017-00 | CERAMIC CHIP | 0.0047MF | 10% | 50V |
| C023 | 1-163-125-00 | CERAMIC CHIP | 220PF | 5% | 50V |
| C028 | 1-163-227-11 | CERAMIC CHIP | 10PF | 0.5PF | 50V |
| C029 | 1-163-227-11 | CERAMIC CHIP | 10PF | 0.5PF | 50V |
| C030 | 1-163-009-11 | CERAMIC CHIP | 0.001MF | 10% | 50V |
| C035 | 1-163-237-11 | CERAMIC CHIP | 27PF | 5% | 50V |
| C036 | 1-163-231-11 | CERAMIC CHIP | 15PF | 5% | 50V |
| C037 | 1-163-243-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C038 | 1-163-243-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C039 | 1-163-243-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C040 | 1-163-243-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C051 | 1-164-161-11 | CERAMIC CHIP | 0.0022MF | 10% | 50V |
| C053 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C056 | 1-163-243-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C061 | 1-163-033-91 | CERAMIC CHIP | 0.022MF | | 50V |
| C062 | 1-163-033-91 | CERAMIC CHIP | 0.022MF | | 50V |
| C063 | 1-126-935-11 | ELECT | 470MF | 20% | 16V |
| C071 | 1-164-096-11 | CERAMIC | 0.01MF | | 50V |
| C072 | 1-164-161-11 | CERAMIC CHIP | 0.0022MF | 10% | 50V |
| C353 | 1-163-231-11 | CERAMIC CHIP | 15PF | 5% | 50V |
| C354 | 1-163-133-00 | CERAMIC CHIP | 470PF | 5% | 50V |
| C355 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C356 | 1-126-963-11 | ELECT | 4.7MF | 20% | 50V |
| C357 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C358 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C359 | 1-126-933-11 | ELECT | 100MF | 20% | 16V |
| C360 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V (except 27V20/29V20M) |
| C361 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V (except 27V20/29V20M) |
| C362 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V (except 27V20/29V20M) |
| C363 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C364 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C365 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C366 | 1-137-399-11 | FILM | 0.1MF | 5% | 50V |
| C367 | 1-137-399-11 | FILM | 0.1MF | 5% | 50V |
| C368 | 1-137-399-11 | FILM | 0.1MF | 5% | 50V |
| C369 | 1-163-243-11 | CERAMIC CHIP | 47PF | 5% | 50V |
| C370 | 1-163-037-11 | CERAMIC CHIP | 0.022MF | 10% | 50V |
| C371 | 1-163-141-00 | CERAMIC CHIP | 0.001MF | 5% | 50V |
| C372 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C373 | 1-124-903-11 | ELECT | 1MF | 20% | 50V |
| C375 | 1-165-319-11 | CERAMIC CHIP | 0.1MF | | 50V (27V20/29V20M) |
| C376 | 1-126-964-11 | ELECT | 10MF | 20% | 50V |
| C377 | 1-137-399-11 | FILM | 0.1MF | 5% | 50V |
| C378 | 1-136-244-11 | FILM | 0.1MF | 5% | 50V |
| C379 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C380 | 1-126-935-11 | ELECT | 470MF | 20% | 16V |
| C381 | 1-163-003-11 | CERAMIC CHIP | 330PF | 10% | 50V |
| C383 | 1-137-399-11 | FILM | 0.1MF | 5% | 50V |
| C385 | 1-164-182-11 | CERAMIC CHIP | 0.0033MF | 10% | 50V |
| C386 | 1-164-232-11 | CERAMIC CHIP | 0.01MF | 10% | 50V |
| C387 | 1-124-925-11 | ELECT | 2.2MF | 20% | 50V |
| C388 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C390 | 1-124-903-11 | ELECT | 1MF | 20% | 50V |
| C391 | 1-163-017-00 | CERAMIC CHIP | 0.0047MF | 10% | 50V |
| C392 | 1-163-251-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C461 | 1-126-963-11 | ELECT | 4.7MF | 20% | 50V (27V35/29V35C/29V75M) |
| C461 | 1-126-964-11 | ELECT | 10MF | 20% | 50V (32V25) |
| C461 | 1-128-551-11 | ELECT | 22MF | 20% | 25V (27V20/27V25/29V20M/29V65M) |
| C462 | 1-124-925-11 | ELECT | 2.2MF | 20% | 50V |
| C463 | 1-124-925-11 | ELECT | 2.2MF | 20% | 50V |
| C466 | 1-104-666-11 | ELECT | 220MF | 20% | 25V |
| C468 | 1-104-664-11 | ELECT | 47MF | 20% | 25V |

The componants identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite.
Ne les remplacer que par une piece portant le numero specifie.

**A**

| REF. NO. | PART NO. | DESCRIPTION | | | REMARK |
|---|---|---|---|---|---|
| C470 | 1-124-925-11 | ELECT | 2.2MF | 20% | 50V |
| C471 | 1-104-666-11 | ELECT | 220MF | 20% | 25V |
| C472 | 1-136-173-00 | FILM | 0.47MF | 5% | 50V |
| C473 | 1-136-169-00 | FILM | 0.22MF | 5% | 50V |
| C474 | 1-126-942-61 | ELECT | 1000MF | 20% | 25V |
| C475 | 1-136-169-00 | FILM | 0.22MF | 5% | 50V |
| C476 | 1-126-942-61 | ELECT | 1000MF | 20% | 25V (27V20/27V25/29V20M/29V65M/32V25) |
| C477 | 1-126-942-61 | ELECT | 1000MF | 20% | 25V (27V20/27V25/29V20M/29V65M/32V25) |
| C501 | 1-102-110-00 | CERAMIC | 220PF | 10% | 50V |
| C502 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C503 | 1-163-003-11 | CERAMIC CHIP | 330PF | 10% | 50V |
| C504 | 1-102-212-00 | CERAMIC | 820PF | 10% | 500V |
| C505 | 1-102-002-00 | CERAMIC | 680PF | 10% | 500V |
| C506 | 1-106-383-00 | MYLAR | 0.047MF | 10% | 200V |
| C507 | ⚠ 1-162-116-51 | CERAMIC | 680PF | 10% | 2KV |
| C508 | 1-102-244-00 | CERAMIC | 220PF | 10% | 500V |
| C509 | 1-162-116-00 | CERAMIC | 680PF | 10% | 2KV |
| C510 | 1-106-367-00 | MYLAR | 0.01MF | 10% | 100V |
| C511 | ⚠ 1-115-460-11 | FILM | 0.022MF | 3% | 1.2KV |
| C513 | ⚠ 1-130-895-51 | FILM | 0.056MF | 5% | 400V |
| C514 | ⚠ 1-104-844-11 | FILM | 0.62MF | 5% | 200V |
| C515 | 1-106-343-00 | MYLAR | 0.001MF | 10% | 100V |
| C516 | 1-115-461-11 | FILM | 2MF | 5% | 200V |
| C517 | 1-107-649-11 | ELECT | 2.2MF | 20% | 250V |
| C518 | 1-106-395-00 | MYLAR | 0.15MF | 10% | 200V |
| C519 | 1-162-815-11 | CERAMIC | 47PF | 5% | 500V |
| C520 | 1-164-645-11 | CERAMIC | 1000PF | 10% | 500V (32V25/32V35/34V35C) |
| C520 | 1-164-646-11 | CERAMIC | 2200PF | 10% | 500V (except 32V25/32V35/34V35C) |
| C521 | 1-164-161-11 | CERAMIC CHIP | 0.0022MF | 10% | 50V |
| C522 | 1-124-903-11 | ELECT | 1MF | 20% | 50V |
| C525 | 1-102-244-00 | CERAMIC | 220PF | 10% | 500V |
| C526 | 1-107-662-11 | ELECT | 22MF | 20% | 250V |
| C527 | 1-162-116-00 | CERAMIC | 680PF | 10% | 2KV |
| C528 | 1-164-161-11 | CERAMIC CHIP | 0.0022MF | 10% | 50V |
| C529 | 1-128-551-11 | ELECT | 22MF | 20% | 25V |
| C530 | 1-137-366-11 | FILM | 0.0022MF | 5% | 50V |
| C531 | 1-126-965-11 | ELECT | 22MF | 20% | 50V |
| C532 | 1-126-965-11 | ELECT | 22MF | 20% | 50V |
| C537 | 1-126-941-11 | ELECT | 470MF | 20% | 25V |
| C539 | ⚠ 1-126-935-91 | ELECT | 470MF | 20% | 16V |
| C540 | 1-123-024-21 | ELECT | 33MF | | 160V |
| C541 | 1-128-560-11 | ELECT | 22MF | 20% | 100V |
| C545 | 1-106-387-00 | MYLAR | 0.068MF | 10% | 200V |
| C546 | 1-106-343-00 | MYLAR | 0.001MF | 10% | 100V |
| C547 | 1-106-343-00 | MYLAR | 0.001MF | 10% | 100V |
| C561 | 1-126-967-11 | ELECT | 47MF | 20% | 50V |
| C563 | 1-126-923-11 | ELECT | 220MF | 20% | 10V |
| C564 | 1-124-903-11 | ELECT | 1MF | 20% | 50V |
| C565 | 1-126-969-11 | ELECT | 220MF | 20% | 50V |
| C566 | 1-126-964-11 | ELECT | 10MF | 20% | 50V |
| C568 | 1-136-169-00 | FILM | 0.22MF | 5% | 50V |
| C571 | 1-104-664-11 | ELECT | 47MF | 20% | 25V |
| C1002 | 1-126-964-11 | ELECT | 10MF | 20% | 50V |
| C1101 | 1-126-768-11 | ELECT | 2200MF | 20% | 16V |
| C1103 | 1-126-965-11 | ELECT | 22MF | 20% | 50V |
| C1104 | 1-126-967-11 | ELECT | 47MF | 20% | 16V |
| C1105 | 1-126-967-11 | ELECT | 47MF | 20% | 16V |
| C1106 | 1-126-964-11 | ELECT | 10MF | 20% | 50V |
| C1107 | 1-163-037-11 | CERAMIC CHIP | 0.022MF | 10% | 50V |
| C1108 | 1-124-903-11 | ELECT | 1MF | 20% | 50V |
| C1109 | 1-126-964-11 | ELECT | 10MF | 20% | 50V |
| C1110 | 1-163-227-11 | CERAMIC CHIP | 10PF | 0.5PF | 50V |
| C1111 | 1-163-227-11 | CERAMIC CHIP | 10PF | 0.5PF | 50V |
| C1112 | 1-163-227-11 | CERAMIC CHIP | 10PF | 0.5PF | 50V |
| C1244 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C1245 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C1351 | 1-163-251-11 | CERAMIC CHIP | 100PF | 5% | 50V |
| C1352 | 1-126-933-11 | ELECT | 100MF | 20% | 16V |
| C1353 | 1-163-037-11 | CERAMIC CHIP | 0.022MF | 10% | 50V |
| C1354 | 1-216-295-91 | CONDUCTOR, CHIP | | | |
| C1401 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C1402 | 1-126-964-11 | ELECT | 10MF | 20% | 50V |
| C1403 | 1-124-902-00 | ELECT | 0.47MF | 20% | 50V |
| C1404 | 1-165-319-11 | CERAMIC CHIP | 0.1MF | | 50V |
| C1405 | 1-165-319-11 | CERAMIC CHIP | 0.1MF | | 50V |
| C1406 | 1-165-319-11 | CERAMIC CHIP | 0.1MF | | 50V |
| C1407 | 1-165-319-11 | CERAMIC CHIP | 0.1MF | | 50V |
| C1408 | 1-164-161-11 | CERAMIC CHIP | 0.0022MF | 10% | 50V |
| C1409 | 1-164-161-11 | CERAMIC CHIP | 0.0022MF | 10% | 50V |
| C1410 | 1-164-161-11 | CERAMIC CHIP | 0.0022MF | 10% | 50V |
| C1411 | 1-164-161-11 | CERAMIC CHIP | 0.0022MF | 10% | 50V |
| C1412 | 1-124-925-11 | ELECT | 2.2MF | 20% | 50V |
| C1413 | 1-124-925-11 | ELECT | 2.2MF | 20% | 50V |
| C1414 | 1-164-489-11 | CERAMIC CHIP | 0.22MF | 10% | 16V |
| C1415 | 1-126-965-11 | ELECT | 22MF | 20% | 50V |
| C1416 | 1-126-933-11 | ELECT | 100MF | 20% | 16V |
| C1417 | 1-126-952-11 | ELECT | 1000MF | 20% | 16V |
| C1420 | 1-164-005-11 | CERAMIC CHIP | 0.47MF | | 25V |
| C1501 | 1-115-462-11 | FILM | 0.12MF | 5% | 200V (32V25/32V35/34V35C) |
| | | <CONNECTOR> | | | |
| CN270 | 1-573-298-11 | CONNECTOR, BOARD TO BOARD 20P | | | |
| CN271 | 1-573-978-21 | CONNECTOR, BOARD TO BOARD 11P | | | |
| CN351 | *1-564-509-11 | PLUG, CONNECTOR 6P | | | |
| CN461 | *1-564-507-11 | PLUG, CONNECTOR 4P (27V20/27V25/29V20M/29V65M/32V25) | | | |
| CN461 | *1-564-510-11 | PLUG, CONNECTOR 7P (27V35/29V35C/29V75M/32V35/34V35C) | | | |
| CN501 | *1-580-798-11 | CONNECTOR PIN (DY) 6P | | | |
| CN503 | *1-564-507-11 | PLUG, CONNECTOR 4P | | | |
| CN1001 | *1-564-512-11 | PLUG, CONNECTOR 9P | | | |
| CN1101 | 1-573-298-11 | CONNECTOR, BOARD TO BOARD 20P (except 27V20/29V20M) | | | |
| CN1103 | 1-573-979-21 | CONNECTOR, BOARD TO BOARD 11P | | | |
| CN1231 | 1-564-511-11 | PLUG, CONNECTOR 8P | | | |
| CN1641 | *1-564-515-11 | PLUG, CONNECTOR 12P | | | |
| CN1941 | *1-564-508-11 | PLUG, CONNECTOR 5P (27V35/29V35C/29V75M/32V35/34V35C) | | | |
| CN3001 | 1-573-298-11 | CONNECTOR, BOARD TO BOARD 20P | | | |
| | | <DIODE> | | | |
| D001 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D002 | 8-719-109-89 | DIODE RD5.6ESB2 | | | |
| D003 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D004 | 8-719-110-17 | DIODE RD10ESB2 | | | |
| D011 | 8-719-983-20 | DIODE MTZJ-T-77-4.3C | | | |
| D013 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D014 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D015 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D353 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D356 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D360 | 8-719-110-17 | DIODE RD10ESB2 | | | |
| D362 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D368 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D462 | 8-719-991-33 | DIODE 1SS133T-77 | | | |
| D501 | 8-719-109-89 | DIODE RD5.6ESB2 | | | |
| D502 | 8-719-945-80 | DIODE ERC06-15S | | | |
| D503 | 8-719-945-80 | DIODE ERC06-15S | | | |
| D504 | 8-719-900-26 | DIODE ERD29-08J | | | |
| D505 | 8-719-908-03 | DIODE GP08D | | | |
| D506 | 8-719-908-03 | DIODE GP08D | | | |

A

Les composants identifies par une trame et une marque ⚠ sont critiques pour la securite. Ne les remplacer que par une piece portant le numero specifie.

The componants identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

| REF. NO. | PART NO. | DESCRIPTION | REMARK |
|---|---|---|---|
| D507 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D515 | 8-719-302-43 | DIODE EL1Z | |
| D516 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D518 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D519 | ⚠ 8-719-302-44 | DIODE EL1Z-V1 | |
| D520 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D521 | 8-719-921-63 | DIODE MTZJ-7.5B | |
| D530 | 8-719-979-85 | DIODE EGP20G | |
| D531 | 8-719-979-85 | DIODE EGP20G | |
| D534 | 8-719-302-43 | DIODE EL1Z | |
| D561 | 8-719-908-03 | DIODE GP08D | |
| D562 | 8-719-911-19 | DIODE 1SS119-25 (27V25/29V65M) | |
| D562 | 8-719-991-33 | DIODE 1SS133T-77 | |
| D1102 | 8-719-982-24 | DIODE MTZJ-33A | |
| D1103 | 8-719-109-89 | DIODE RD5.6ESB2 | |
| D1248 | 8-719-981-99 | DIODE MTZJ-T-77-3.3 | |
| D1263 | 8-719-110-17 | DIODE RD10ESB2 | |
| D1264 | 8-719-110-17 | DIODE RD10ESB2 | |
| | | <FERRITE BEAD> | |
| FB501 | 1-410-396-41 | FERRITE BEAD INDUCTOR 0.45UH | |
| FB502 | 1-410-397-21 | FERRITE BEAD INDUCTOR 1.1UH | |
| FB503 | 1-410-397-21 | FERRITE BEAD INDUCTOR 1.1UH | |
| | | <IC> | |
| IC001 | 8-752-874-16 | IC CXP85640-005S | |
| IC002 | 8-759-354-28 | IC ST24C02FM6TR | |
| IC351 | 8-752-076-08 | IC CXA2025S | |
| IC461 | 8-759-980-43 | IC TDA2009A | |
| IC501 | 8-759-700-07 | IC NJM2903M | |
| IC561 | 8-759-980-58 | IC TDA8172 | |
| IC1001 | 8-752-058-68 | IC CXA1315M | |
| IC1401 | 8-759-369-39 | IC BH3856FS-E2 | |
| IC1402 | 8-759-100-96 | IC uPC4558G2 | |
| | | <CHIP CONDUCTOR> | |
| JR001 | 1-216-295-91 | CONDUCTOR, CHIP | |
| JR351 | 1-216-295-91 | CONDUCTOR, CHIP (27V20/29V20M) | |
| JR352 | 1-216-295-91 | CONDUCTOR, CHIP (27V20/29V20M) | |
| JR1351 | 1-216-295-91 | CONDUCTOR, CHIP | |
| JR1352 | 1-216-295-91 | CONDUCTOR, CHIP | |
| JR4101 | 1-216-295-91 | CONDUCTOR, CHIP | |
| JR4108 | 1-216-295-91 | CONDUCTOR, CHIP | |
| JR4110 | 1-216-295-91 | CONDUCTOR, CHIP | |
| JR4114 | 1-216-295-91 | CONDUCTOR, CHIP | |
| JR4116 | 1-216-295-91 | CONDUCTOR, CHIP | |
| JR4120 | 1-216-295-91 | CONDUCTOR, CHIP | |
| | | <COIL> | |
| L001 | 1-408-421-00 | INDUCTOR 100UH | |
| L002 | 1-408-421-00 | INDUCTOR 100UH | |
| L003 | 1-410-470-11 | INDUCTOR 10UH | |
| L004 | 1-410-470-11 | INDUCTOR 10UH | |
| L352 | 1-412-537-31 | INDUCTOR 100UH | |
| L461 | 1-410-470-11 | INDUCTOR 10UH | (27V20/27V25/29V20M/29V65M) |
| L461 | 1-410-472-41 | INDUCTOR 15UH (32V25) | |
| L461 | 1-410-473-11 | INDUCTOR 18UH (27V35/29V35C/29V75M) | |
| L501 | ⚠ 1-409-861-11 | COIL, HORIZONTAL LINEARITY | |
| L502 | 1-412-552-11 | INDUCTOR 2.2mH | |
| L503 | 1-406-677-11 | COIL, CHOKE 10mH | |
| L511 | 1-406-607-11 | COIL, CHOKE 15mH | |
| L517 | 1-412-552-11 | INDUCTOR 2.2mH | |
| L1101 | 1-408-421-00 | INDUCTOR 100UH | |
| L1102 | 1-410-470-11 | INDUCTOR 10UH | |
| L1401 | 1-410-494-11 | INDUCTOR 1mH | |
| | | <IC LINK> | |
| PS461 | ⚠ 1-532-984-91 | LINK, IC (2A/90V) | |
| | | <TRANSISTOR> | |
| Q001 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| Q002 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | |
| Q003 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | |
| Q004 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| Q010 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | |
| Q011 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | |
| Q012 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | |
| Q013 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | |
| Q014 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | |
| Q015 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | |
| Q016 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | |
| Q017 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| Q301 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| Q302 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| Q303 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| Q354 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | |
| Q356 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| Q357 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | (27V35/29V35C/29V75M/32V35/34V35C) |
| Q358 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | |
| Q461 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | |
| Q462 | 8-729-216-22 | TRANSISTOR 2SA1162-G | |
| Q501 | 8-729-140-96 | TRANSISTOR 2SD774-34 | |
| Q502 | ⚠ 8-729-018-96 | TRANSISTOR 2SC4927-02 | |
| Q503 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | |
| Q511 | ⚠ 8-729-422-26 | TRANSISTOR 2SD601A-QRS-TX | |
| Q512 | ⚠ 8-729-809-29 | TRANSISTOR 2SC4159-E | |
| Q561 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | |
| Q562 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | |
| Q563 | 8-729-105-08 | TRANSISTOR 2SA1330-O6 | |
| Q1102 | 8-729-119-78 | TRANSISTOR 2SC2785-HFE | |
| Q1103 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | |
| Q1231 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | |
| Q1232 | 8-729-422-27 | TRANSISTOR 2SD601A-Q | |
| | | <RESISTOR> | |
| R001 | 1-216-045-00 | METAL GLAZE 680 5% 1/10W | |
| R002 | 1-247-815-91 | CARBON 220 5% 1/4W | |
| R003 | 1-216-097-91 | METAL GLAZE 100K 5% 1/10W | |
| R004 | 1-216-121-91 | METAL GLAZE 1M 5% 1/10W | |
| R005 | 1-247-815-91 | CARBON 220 5% 1/4W | |
| R006 | 1-247-815-91 | CARBON 220 5% 1/4W | (except 27V20/29V20M) |
| R007 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R008 | 1-247-815-91 | CARBON 220 5% 1/4W | (except 27V20/29V20M) |
| R009 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R010 | 1-216-037-00 | METAL GLAZE 330 5% 1/10W | |
| R011 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R012 | 1-216-033-00 | METAL GLAZE 220 5% 1/10W | |
| R013 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R014 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R015 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R016 | 1-216-073-00 | METAL GLAZE 10K 5% 1/10W | |
| R019 | 1-249-425-11 | CARBON 4.7K 5% 1/4W | |
| R020 | 1-216-065-00 | METAL GLAZE 4.7K 5% 1/10W | |
| R022 | 1-249-429-11 | CARBON 10K 5% 1/4W | (except 27V20/29V20M) |
| R023 | 1-216-089-91 | METAL GLAZE 47K 5% 1/10W | |
| R024 | 1-216-085-00 | METAL GLAZE 33K 5% 1/10W | |

| REF. NO. | PART NO. | DESCRIPTION | | | REMARK |
|---|---|---|---|---|---|
| R025 | 1-216-121-91 | METAL GLAZE | 1M | 5% | 1/10W |
| R026 | 1-216-019-00 | METAL GLAZE | 56 | 5% | 1/10W |
| R027 | 1-216-049-91 | METAL GLAZE | 1K | 5% | 1/10W (except 27V20/29V20M) |
| R028 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R029 | 1-216-025-91 | METAL GLAZE | 100 | 5% | 1/10W |
| R030 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R031 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W (except 27V20/29V20M) |
| R032 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W |
| R034 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W |
| R035 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W |
| R036 | 1-216-049-91 | METAL GLAZE | 1K | 5% | 1/10W |
| R037 | 1-216-049-91 | METAL GLAZE | 1K | 5% | 1/10W |
| R038 | 1-216-049-91 | METAL GLAZE | 1K | 5% | 1/10W |
| R039 | 1-247-807-31 | CARBON | 100 | 5% | 1/4W |
| R040 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W (except 27V20/29V20M) |
| R041 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W (except 27V20/29V20M) |
| R042 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W (except 27V20/29V20M) |
| R043 | 1-216-049-91 | METAL GLAZE | 1K | 5% | 1/10W |
| R044 | 1-216-049-91 | METAL GLAZE | 1K | 5% | 1/10W |
| R045 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W (except 27V20/29V20M) |
| R046 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W |
| R047 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R048 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R049 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R050 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W (except 27V20/29V20M) |
| R051 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W |
| R052 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W |
| R053 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W |
| R054 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W |
| R055 | 1-216-097-91 | METAL GLAZE | 100K | 5% | 1/10W |
| R056 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R057 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R058 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R064 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W |
| R065 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W |
| R066 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W |
| R067 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R068 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W |
| R069 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W |
| R070 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W |
| R071 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W |
| R072 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R073 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R074 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R075 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R076 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R077 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R078 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W |
| R079 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R080 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W |
| R081 | 1-216-025-91 | METAL GLAZE | 100 | 5% | 1/10W |
| R082 | 1-216-025-91 | METAL GLAZE | 100 | 5% | 1/10W |
| R083 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R084 | 1-216-049-91 | METAL GLAZE | 1K | 5% | 1/10W |
| R087 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W |
| R090 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W (except 27V20/29V20M) |
| R092 | 1-249-429-11 | CARBON | 10K | 5% | 1/4W |
| R097 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W |
| R099 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W |
| R131 | 1-216-035-00 | METAL GLAZE | 270 | 5% | 1/10W |
| R132 | 1-216-115-00 | METAL GLAZE | 560K | 5% | 1/10W |
| R133 | 1-216-039-00 | METAL GLAZE | 390 | 5% | 1/10W |
| R135 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R136 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R137 | 1-216-047-91 | METAL GLAZE | 820 | 5% | 1/10W |
| R353 | 1-208-786-11 | METAL GLAZE | 1.5K | 0.50% | 1/10W |
| R354 | 1-216-077-00 | METAL GLAZE | 15K | 5% | 1/10W |
| R355 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R356 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R358 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W (except 27V20/29V20M) |
| R359 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W (except 27V20/29V20M) |
| R360 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W (except 27V20/29V20M) |
| R361 | 1-216-025-91 | METAL GLAZE | 100 | 5% | 1/10W |
| R362 | 1-216-025-91 | METAL GLAZE | 100 | 5% | 1/10W |
| R363 | 1-216-025-91 | METAL GLAZE | 100 | 5% | 1/10W |
| R364 | 1-216-101-00 | METAL GLAZE | 150K | 5% | 1/10W |
| R365 | 1-216-101-00 | METAL GLAZE | 150K | 5% | 1/10W |
| R366 | 1-216-089-91 | METAL GLAZE | 47K | 5% | 1/10W |
| R367 | 1-216-097-91 | METAL GLAZE | 100K | 5% | 1/10W |
| R368 | 1-249-441-11 | CARBON | 100K | 5% | 1/4W |
| R369 | 1-216-097-91 | METAL GLAZE | 100K | 5% | 1/10W |
| R370 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W (27V35/29V35C/29V75M/32V35/34V35C) |
| R371 | 1-216-053-00 | METAL GLAZE | 1.5K | 5% | 1/10W (27V35/29V35C/29V75M/32V35/34V35C) |
| R372 | 1-216-113-00 | METAL GLAZE | 470K | 5% | 1/10W |
| R373 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R374 | 1-216-125-00 | METAL GLAZE | 1.5M | 5% | 1/10W |
| R375 | 1-216-025-91 | METAL GLAZE | 100 | 5% | 1/10W |
| R376 | 1-216-073-00 | METAL GLAZE | 10K | 5% | 1/10W |
| R379 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R380 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W |
| R381 | 1-247-815-91 | CARBON | 220 | 5% | 1/4W |
| R382 | 1-216-033-00 | METAL GLAZE | 220 | 5% | 1/10W |
| R383 | 1-216-049-91 | METAL GLAZE | 1K | 5% | 1/10W |
| R384 | 1-216-109-00 | METAL GLAZE | 330K | 5% | 1/10W |
| R385 | 1-249-422-11 | CARBON | 2.7K | 5% | 1/4W |
| R386 | 1-216-049-91 | METAL GLAZE | 1K | 5% | 1/10W (except 27V20/29V20M) |
| R387 | 1-216-049-91 | METAL GLAZE | 1K | 5% | 1/10W |
| R388 | 1-216-089-91 | METAL GLAZE | 47K | 5% | 1/10W |
| R389 | 1-216-067-00 | METAL GLAZE | 5.6K | 5% | 1/10W |
| R390 | 1-216-035-00 | METAL GLAZE | 270 | 5% | 1/10W |
| R391 | 1-208-810-11 | METAL GLAZE | 15K | 0.50% | 1/10W |
| R392 | 1-216-025-91 | METAL GLAZE | 100 | 5% | 1/10W |
| R393 | 1-216-043-91 | METAL GLAZE | 560 | 5% | 1/10W |
| R394 | 1-216-059-00 | METAL GLAZE | 2.7K | 5% | 1/10W |
| R395 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W |
| R396 | 1-249-417-11 | CARBON | 1K | 5% | 1/4W (27V35/29V35C/29V75M/32V35/34V35C) |
| R397 | 1-249-425-11 | CARBON | 4.7K | 5% | 1/4W |
| R461 | 1-216-065-00 | METAL GLAZE | 4.7K | 5% | 1/10W |
| R462 | 1-216-089-91 | METAL GLAZE | 47K | 5% | 1/10W |
| R463 | 1-249-435-11 | CARBON | 33K | 5% | 1/4W |
| R464 | 1-216-097-91 | METAL GLAZE | 100K | 5% | 1/10W |
| R465 | 1-249-413-11 | CARBON | 470 | 5% | 1/4W |
| R466 | 1-249-383-11 | CARBON | 1.5 | 5% | 1/4W F (27V35/29V35C/29V75M) |
| R466 | 1-249-385-11 | CARBON | 2.2 | 5% | 1/4W F (27V20/27V25/29V20M/29V65M/32V25) |
| R467 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W |
| R469 | 1-216-055-00 | METAL GLAZE | 1.8K | 5% | 1/10W (27V20/27V25/29V20M/29V65M/32V25) |
| R469 | 1-216-061-00 | METAL GLAZE | 3.3K | 5% | 1/10W (32V35/34V35C) |
| R469 | 1-216-067-00 | METAL GLAZE | 5.6K | 5% | 1/10W (27V35/29V35C/29V75M) |
| R471 | 1-216-069-00 | METAL GLAZE | 6.8K | 5% | 1/10W |
| R472 | 1-216-055-00 | METAL GLAZE | 1.8K | 5% | 1/10W (27V20/27V25/29V20M/29V65M/32V25) |